ORDER NO. AED9809012

Service Manual

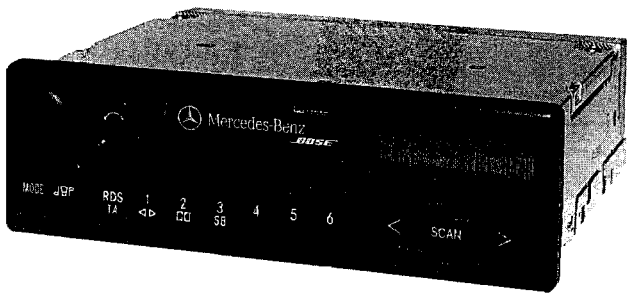
AUTOMOTIVE ELECTRONICS

Mercedes-Benz

VEHICLE	DESTINATION	PRODUCED AFTER	MERCEDES-BENZ PART NO.	MATUSHITA MODEL NO.
M Class	EUROPE	Sep., 1998	A 163 820 00 86	CQ-LP2820Z
M Class	EUROPE	Sep., 1998	A 163 820 03 86	CQ-LP2821Z

MW / FM / RDS MPX ELECTRONIC TUNING RADIO with Stereo Cassette Tape Player

PANA -09601



<CQ-LP2820Z>

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol ◫ are trade marks of Dolby Laboratories Licensing Corporation.

Specifications*

General

Power Supply	: DC 12V Negative Ground, Test Voltage 13.2V
Current Consumption	:
<CQ-LP2820Z>	: Less than 1.0A
<CQ-LP2821Z>	: Less than 3.0A
Maximum Output Voltage	:
<CQ-LP2820Z>	: More than 1.0Vrms (at 10kΩ)
<CQ-LP2821Z>	: 15W × 4 (at 4Ω)

MW Radio

Frequency Range	: 531 - 1,620kHz
Usable Sensitivity	: 26dB (μV)
Seek Sensitivity	: 30dB (μV)

FM Radio

Frequency Range	: 87.5 ~ 108.0MHz
Stereo Spearation	: 40dB
Stereo Sensitivity	: 4dB (μV)
Seek Sensitivity	: 25dB (μV)

Tape Player**

Reproduction System	: 4-Track, 2-Program Stereo
Tape Speed	: 1-7/8" (4.76 cm/sec)
Wow and Flutter	: 0.07% (WRMS)
Stereo Separation	: 50dB
Signal/Noise Ratio	: 56dB

Dimensions** : 178mm × 169mm × 50mm

Weight :**

<CQ-LP2820Z>	: 1.3kg
<CQ-LP2821Z>	: 1.4kg

* Specifications subject to change without notice.
** Dimensions and Weight showm are approximate.

©1998 Matsushita Communication Industrial Co., Ltd. All rights reserved. Unauthorized copying and distribution is a voiolation of law.

Panasonic

(Recycled Paper)

960

⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced proffesional technicians. Any attempt to service or repair the product or producs dealt with in this service information by anyone else could result in serious injury or death.

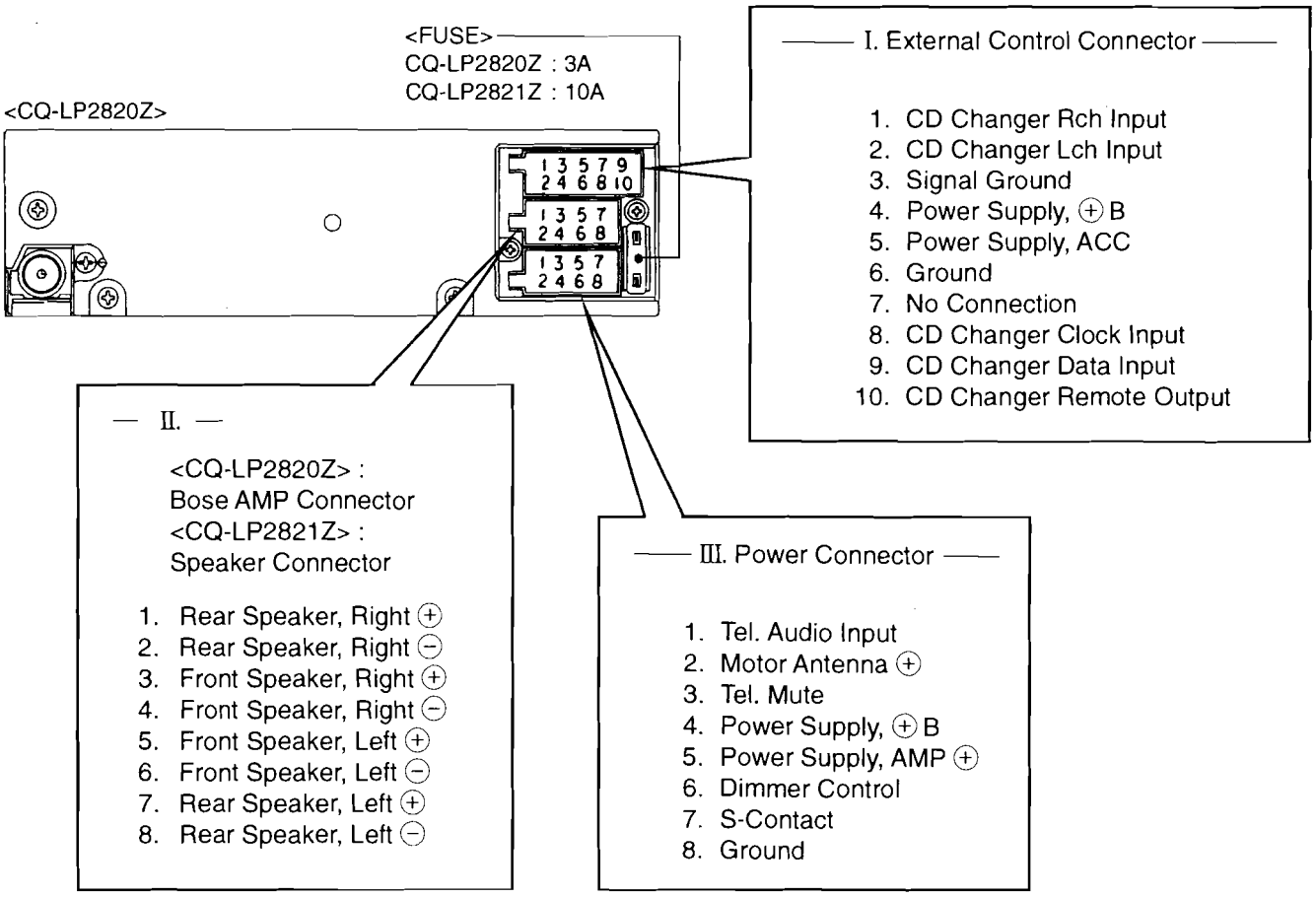
CONTENTS

	Page
FEATURES	1
REAR VIEW AND CONNECTORS	1
NAME AND FUNCTION OF EACH PARTS	2
OPERATION OF CONTROLS	3 ~ 5
ALIGNMENT INSTRUCTIONS	6
ALIGNMENT POINTS	6
WIRING CONNECTION	7
BLOCK DIAGRAM	8
WIRING DIAGRAM (Display, AMP)	9
WIRING DIAGRAM (Main)	10
WIRING DIAGRAM (Tape)	11
SCHEMATIC DIAGRAM (Tape)	12
SCHEMATIC DIAGRAM (Main, AMP:CQ-LP2820Z)	13
SCHEMATIC DIAGRAM (Main, AMP:CQ-LP2821Z)	14
SCHEMATIC DIAGRAM (Display)	15
TERMINALS DESCRIPTION	16
PACKAGE AND IC BLOCK DIAGRAM	17 ~ 20
REPLACEMENT PARTS LIST	21 ~ 26, 28, 29
EXPLODED VIEW (Unit)	27
EXPLODED VIEW (Tape Deck)	30

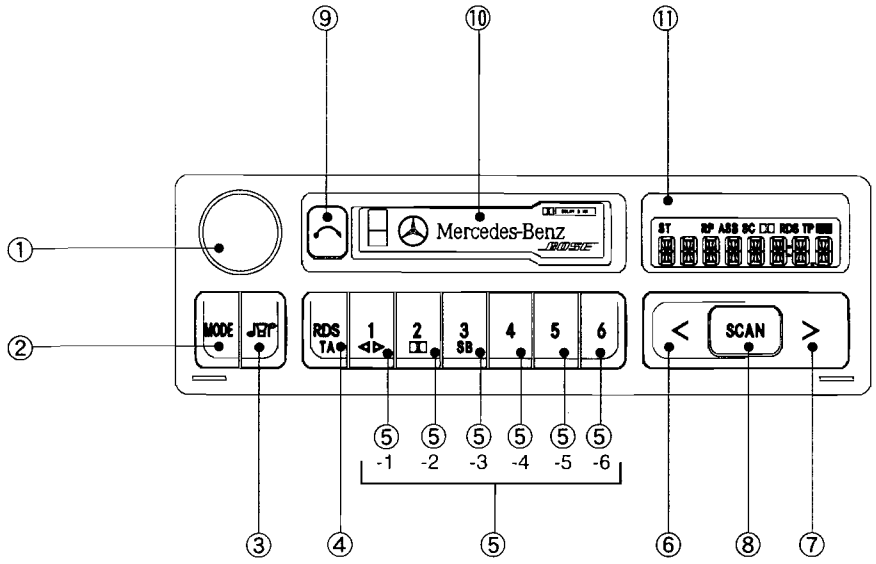
FEATURES

- PLL (Phase Locked Loop)Synthesized Tuning.
- 12-Stations Preset (MW-6, FM-6).
- RDS function.
- Seek tuning function.
- Scan tuning function.
- Dolby B NR function.
- CD changer control.
- Electronic audio control.
- 15W × Power amp. (CQ-LP2821Z)
- Pre-out for Base amp. (CQ-LP2820Z)

REAR VIEW AND CONNECTOR



NAME AND FUNCTION OF EACH PARTS



<CQ-LP2820Z>

Note:
CQ-LP2821Z Dust Cover

① PWR/VOL : Power ON/OFF.
Increase/Decrease of volume.
② MODE : FM/AM/CC/CD mode selection.
③ SEL : Sound adjustment mode selection.
④ RDS TA : RDS ON/OFF.
⑤ 1 ~ 6 : Preset a radio frequency or calls a preset frequency.
CD disk selection
⑤-1 TRK : Playing tape side change.
⑤-2 DOLBY : Dolby B NR ON/OFF.
⑤-3 SB : Tape skip blank. <CQ-LP2820Z only>
⑥ 〈 : Radio frequency down.
Downward seeking.
Tape rewind.
CD track down/seach down.

⑦ 〉 : Radio frequency up.
Upward seeking.
Tape fast-forward.
CD track up/search up.
⑧ SCAN <CQ-LP2820Z only>
: Radio scan tuning.
Tape scan playing.
CD track scanning.
⑨ EJ : Tape eject.
⑩ Cassette slot.
⑪ LCD Display.

OPERATION OF CONTROLS

1. POWER SWITCH AND VOLUME CONTROL

	Operation	Working
1	• Depress the knob ①. • Depress the knob ① again.	• Power is on. • Power is off.
2	• Turn the VOL knob ① to the right. • Turn the VOL knob ① to the left.	• Increase the volume. • Decrease the volume.

2. FADER, BASS, TREBLE AND BARANCE CONTROL

	Operation	Working
1	• Depress the SEL button ③.	•Depress the button ③ so that the mode will become "FADER" adjustment mode.
	• Turn the knob ① right or left.	•Front/Rear level becomes increase.
2	• Depress the SEL button ③.	•Depress the button ③ so that the mode will become "BASS" adjustment mode.
	• Turn the knob ① right or left.	•Bass level becomes increase/ decrease.
3	• Depress the SEL button ③.	•Depress the button ③ so that the mode will become "TREBLE" adjustment mode.
	• Turn the knob ① right or left.	•Treble level becomes increase/ decrease.
4	• Depress the SEL button ③.	•Depress the button ③ so that the mode will become "BALANCE" adjustment mode.
	• Turn the knob ① right or left.	•Right/Left channel level becomes increase.
• Depress the button ⑤-1 or ⑤-2 more than 2 sec. during sound adjustment mode.		•All of the sound adjustment level is stored to the user memory 1 (⑤-1) or user memory 2 (⑤-2).
• Depress the button ⑤-1 or ⑤-2 more than 2 sec. during sound adjustment mode.		•All of the sound adjustment level is called from the user memory 1 (⑤-1) or user memory 2 (⑤-2).

3. MODE SELECTION

	Operation	Working
1	• Depress the MODE button ②.	• The mode changes as below. →FM →TP →MW CD←CC←

4. RADIO FUNCTION

1) MANUAL TUNING

	Operation	Working
1	• Depress the button ⑦ more than 2 sec.	• Receiving frequency becomes higher by one step. • One Step : 9kHz (MW) 100kHz (FM)
2	• Depress the button ⑥ more than 2 sec.	• Receiving frequency becomes lower by one step.

2) SEEK TUNING

	Operation	Working
1	• Depress the button ⑦ less than 2 sec.	• The seek operation in the screen up direction is made. • The play stops when there is a station and this state is kept as is.
2	• Depress the button ⑥ less than 2 sec.	• The seek oepration in the screen down direction is made. • The play stops when there is a station and this state is kept as is.

3) AUTO PRESET TUNING

	Operation	Working
1	• Depress the MODE button ② more than 2 sec.	• Up to six strongest stations along the frequency band will automatically memorize into memory.
2	• Depress the MODE button ② less than 2 sec.	• Memorize stations are called in order. • If the number of broadcasting stations stored in memory is less the six, the corresponding channel is displayed as"—"

4) SCAN UP TUNING <CQ-LP2620Z only>

	Operation	Working
1	• Depress the SCAN button⑧.	•The frequency becomes continuously higher by one step. •When receiving a station, scanning operation pauses automatically for approx 8 sec, and then start scanning for next station again.

5) PRESET

	Operation	Working
1	• Depress the button ⑤ more than 2 sec.	• 12-station preset tuning. (6-MW, 6-FM)
2	• Depress the button ⑤ less than 2 sec.	• Calls the presetting frequency.

• Initial Data

(Unit : MW/kHz, FM/MHz)

	M1	M2	M3	M4	M5	M6
MW	531	603	999	1404	1602	1620
FM	87.7	87.9	95.7	98.1	104.1	107.9

6) RDS

	Operation	Working
1	• Depress the RDS/TA button ④ less than 2 sec.	• In FM or TP bang, "RDS function" can be switched of/off cyclically. • In "RDS ON mode", some functions are activated, and some functions are canceled as below. • PS (Program Service name) displaying. • AF (Alternative Frequencies) function. • AUTO REG function. • RDS station memory/recall function. • Program Seek/Scan function.

5. TAPE CONTROLS

1) FF, REW

	Operation	Working
1	• Depress the button ⑦.	• If the tape is playing, the FF mode is selected.
2	• Depress the button ⑥.	• If the tape is playing, the REW mode is selected.

2) PROG

	Operation	Working
1	• Depress the TRK button⑤-1.	• If this button is depressed during the play mode the playing side change to the other side. • If this button is depressed during the FF or REW mode, the tape turns back and the mode changes to the play mode.

3) DOLBY NR

	Operation	Working
1	• Depress the button ⑤-2.	• The Dolby indicator lights (In the tape mode). • Dolby ON-OFF-ON is repeated each time the NR button is depressed.

4) MUSIC SERCH

	Operation	Working
1	• Depress the button ⑦more than 2 sec.	• The tape runs fast-forward, until detecting no sound.
2	• Depress the button ⑥more than 2 sec.	• The tape runs rewind, until detecting no sound.

5) SCAN <CQ-LP2820Z only>

	Operation	Working
1	• Depress the SCAN button ⑧.	• The first 10 seconds of each music play in order.

6) SKIP <CQ-LP2820Z only>

	Operation	Working
1	• Depress the SB button⑤-3.	• The tape runs fast-forward, no sound (more than 15 sec.) is detected and the tape is playing.

6. CD CHANGER CONTROLS

1) TRACK UP, DOWN

	Operation	Working
1	• Depress the button ⑦less than 2 sec.	• The next track of the current disc will be accessed and played.
2	• Depress the button ⑥less than 2 sec.	• When the playing time has already passed over 10 sec., the beginning of the current track will be accessed and played. • When the playing time is within 10 sec., the previous track of the current disc will be accessed and played.

2) DISC UP / DOWN

	Operation	Working
1	• Depress the desired disc No. by the button ⑤ .	• Selecting disc is played.

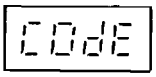
3) SEARCH UP / DOWN

	Operation	Working
1	• Depress the button ⑦ more than 2 sec.	• The CD runs fast-forward through a track.
2	• Depress the button ⑥ more than 2 sec.	• The CD runs reverse through a track.

4) SCAN <CQ-LP2820Z only>

	Operation	Working
1	• Depress the SCAN button ⑧ .	• The first 10 seconds of each track on the disc play in order.

7. ANTI-THEFT

	Working
1	**<Waiting for an Entry of Anti-theft Code>** 1) The following display is made when the until for preventing thefts is mounted in the equipment to wait for an entry of anti-theft code.  2) "Waiting for an entry of anti-theft code" is displayed when the BATTERY ⊕ ceases to be supplied, which is similar to a case where the anti-theft unit has been removed from the equipment.
2	**<An Entry of Anti-theft Code>** 1) To enter the anti-theft code, use preset buttons P1 through P6 (⑤-1 ~ ⑤-6). 2) To decide the anti-theft code, use SCAN button ⑧ or button ⑥ .
3	**<When the Entered Code Coincides>** • The equipment is placed in the radio mode of operation.
4	**<When the Entered Code Does Not Coincide>** • The equipment is put in a anti-theft code entry waiting state as mentioned in 1-1) above.
5	**<When the State of Item 4 Repeated three Times>** • All operations are disabled.
6	**<Security Code Re-Entered State>** <The first time of the state of item 5> • After the unit elapse 10 minutes, the equipment is placed item 2. <The second time of the state of item 5> • After the unit elapse 10 minutes, the equipment is placed item 2. <The third time of the state of item 5> • After the unit elapse 60 minutes, the equipment is placed item 2.

ALIGNMENT INSTRUCTIONS

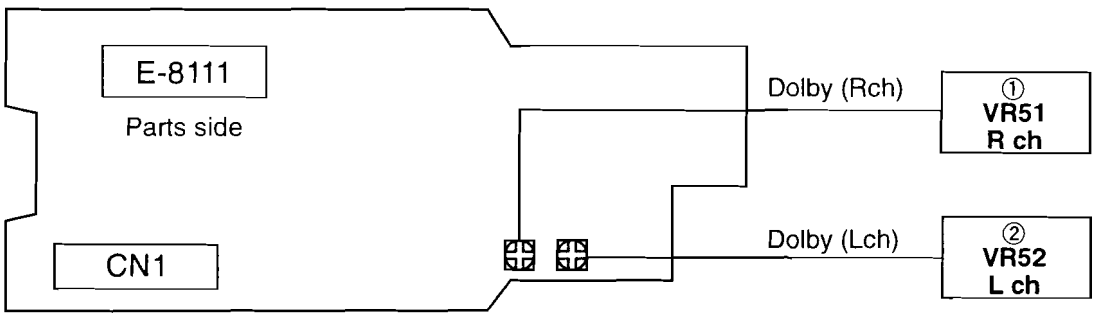
- Power Supply Voltage : DC13.2V
- Output Impedance
  <CQ-LP2820Z>: 10kΩ
  <CQ-LP2821Z>: 4kΩ
- Output Power : Vol. Min.
- Bass/Treb Control : Center
- Balance/Fader Control : Center
- Dolby NR : OFF

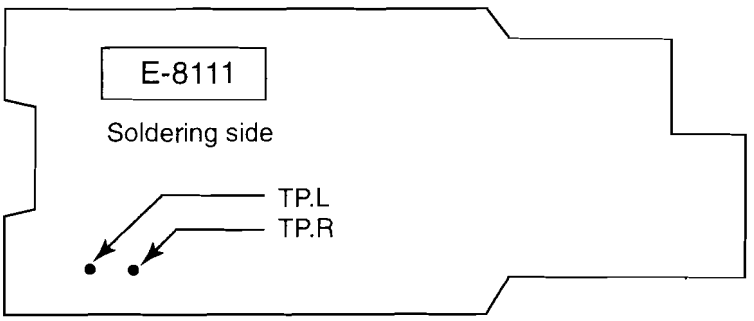
Note:
Do not align the AM/FM package blocks. When the package block is necessary, it will be supplied already aligned at the factory.

1. DOLBY NR ALIGNMENT

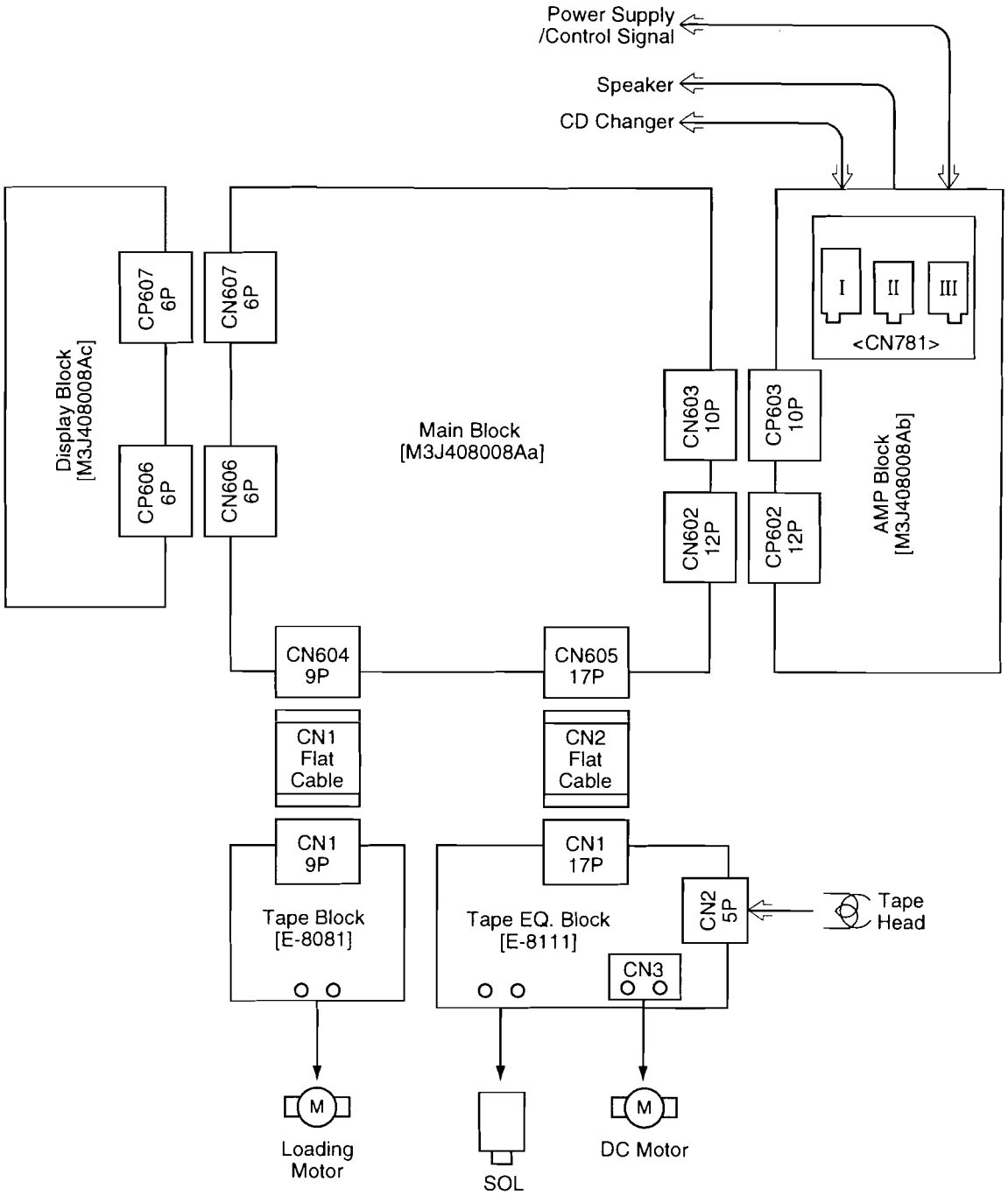
Step	Alignment Item	Test Tape	VTVM Connection	Adjust	Remarks
①	DOLBY NR (Rch)	RFKZ0038	TP.R-Ground	VR51	● Adjust for 388mV ±0.5dB
②	DOLBY NR (Lch)	RFKZ0038	TP.L-Ground	VR52	● Adjust for 388mV ±0.5dB

ALIGNMENT POINT





WIRING CONNECTION

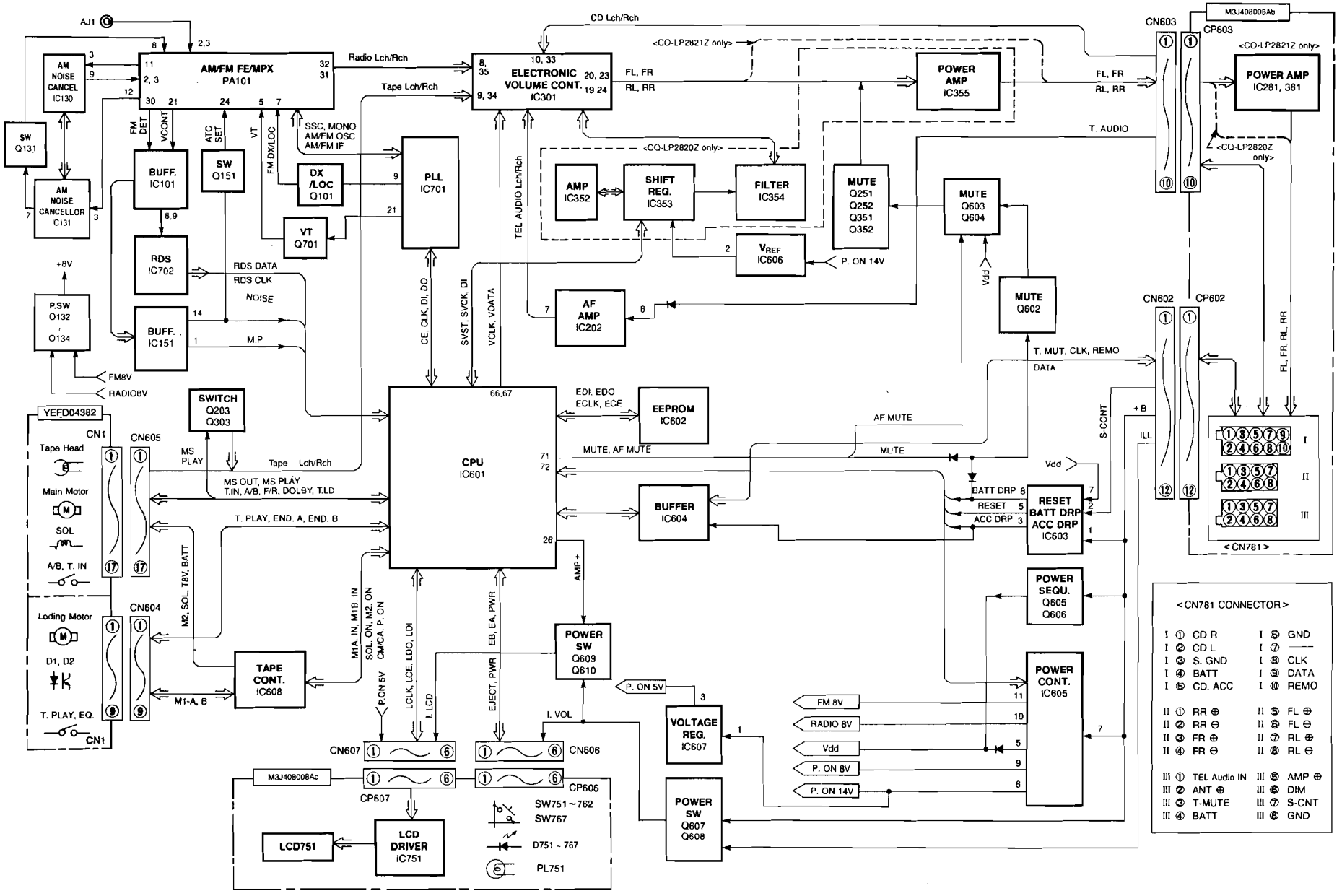


<Note> :

▭ .....This mark shows a Ref. No. of connector

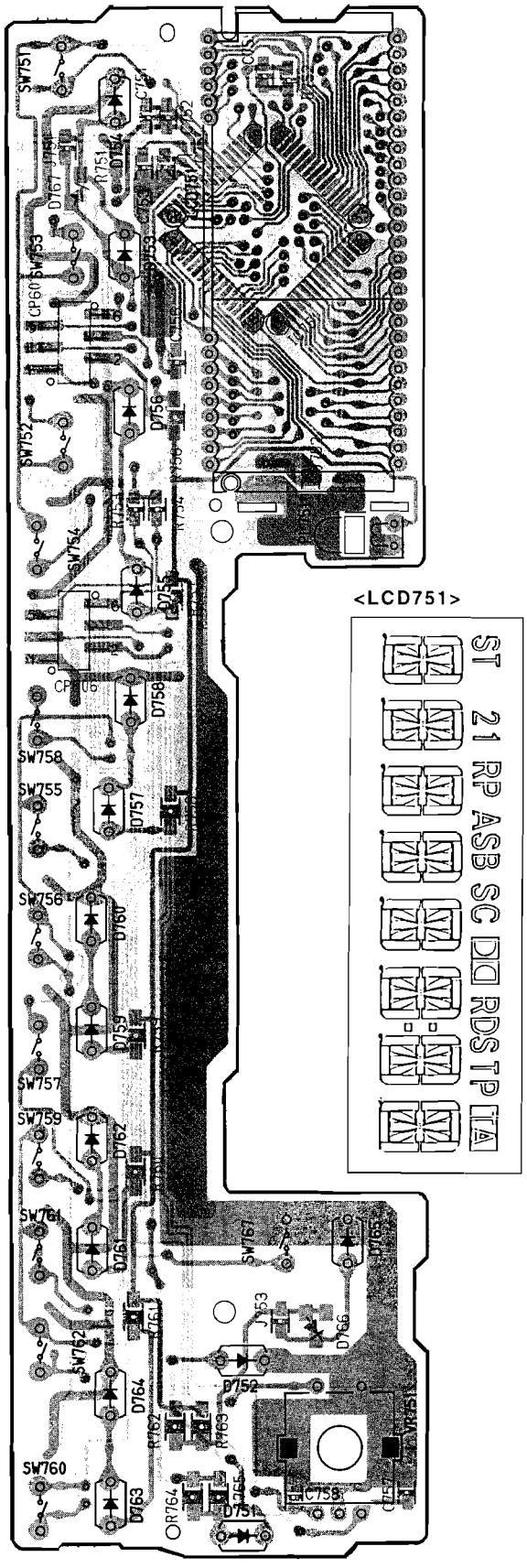
⋯ .....This mark shows a mounting position of connector.

BLOCK DIAGRAM MODELS CQ-LP2820Z/2821Z

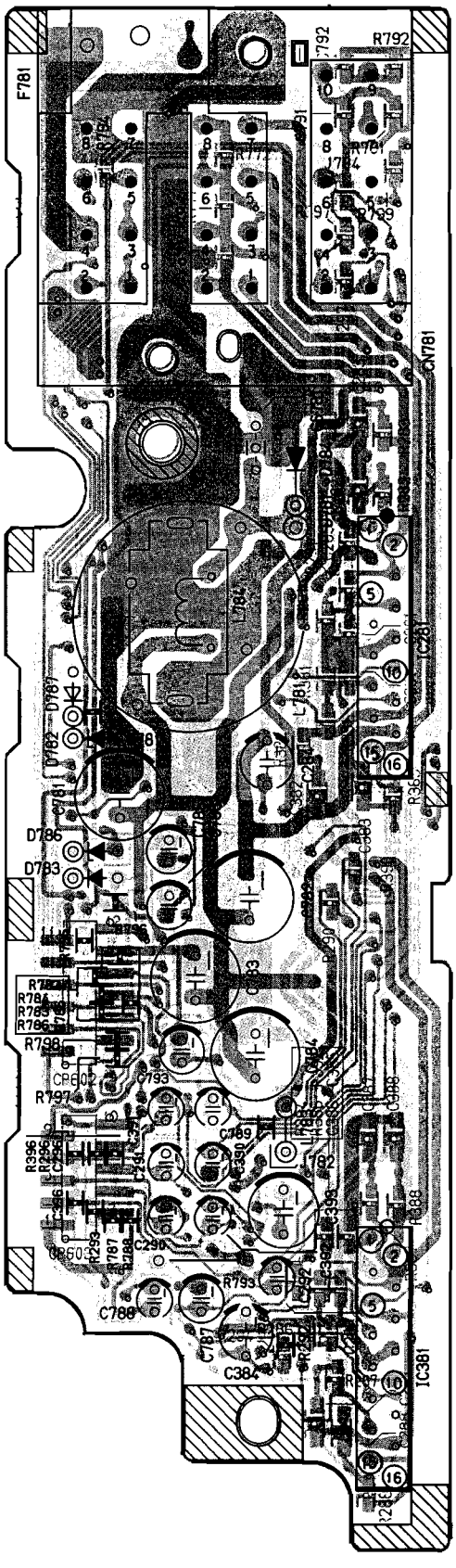


WIRING DIAGRAM (Display, AMP Block) MODELS CQ-LP2820Z/2821Z

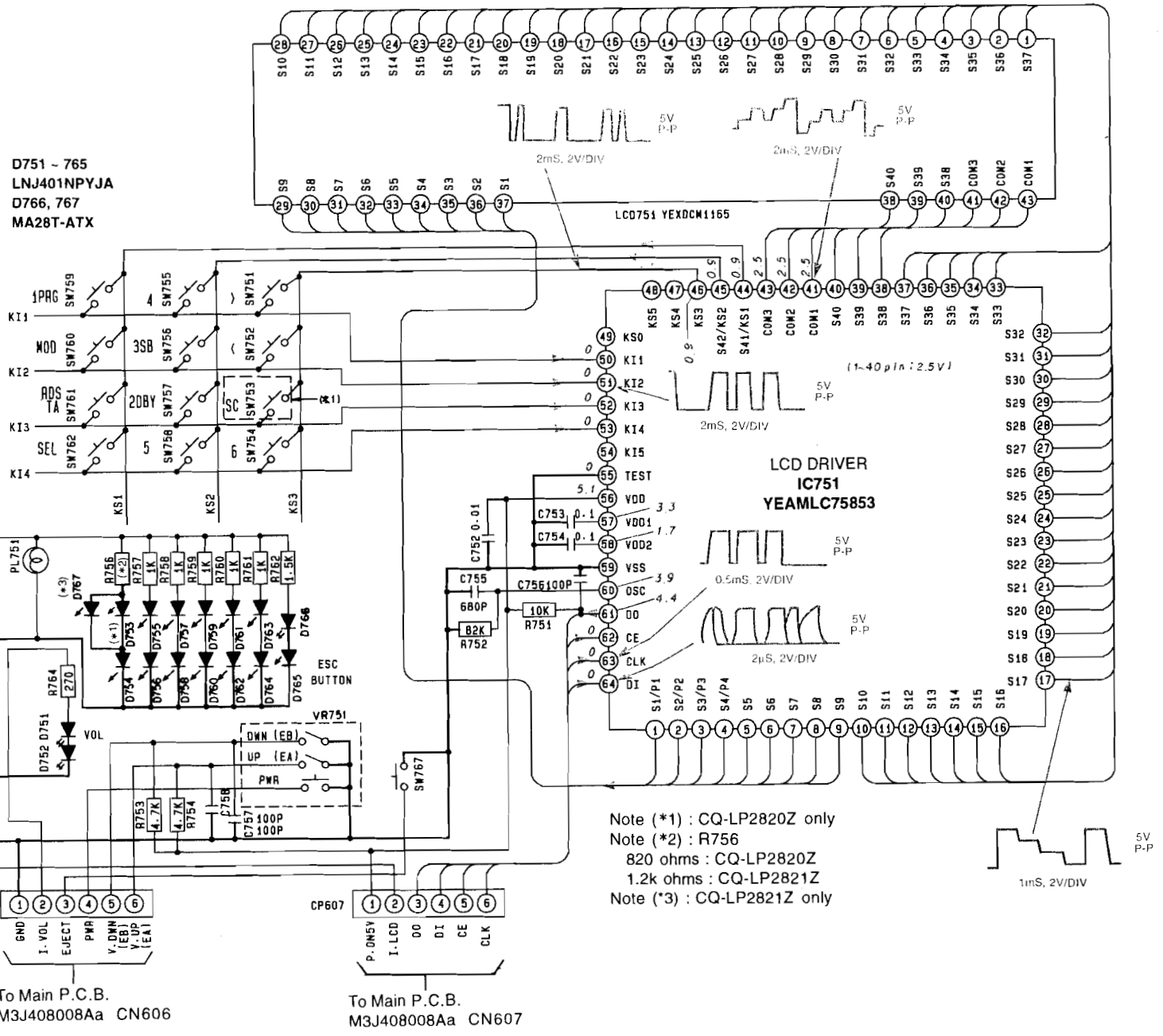
[M3J408008Ac]



[M3J408008Ab]



SCHEMATIC DIAGRAM (Display Block) MODELS CQ-LP2820Z/2821Z



TERMINALS DESCRIPTION

<Main Block>

■ IC601 YEAMH3397F01

Pin No.	Port	Description	I/O	Vol.(V)	Pin No.	Port	Description	I/O	Vol.(V)
1	/RES	Reset input	I	4.6	41	PLL.D1	PLL data	O	0
2	XTAL	Crystal oscillator	—	2.2	42	BEEP	PLL data	I	5.0
3	EXTAL	Crystal oscillator	—	1.8	43	BEEP	Beep output	O	0
4	MD1	(+5V pull-up)	—	5.1	44	E2.CE	EEPROM chip enable	O	0
5	MD2	(+5V pull-up)	—	5.1	45	E2.CLK	EEPROM clock	O	0
6	T.LOAD	Tape loading detection	I	0	46	E2.D1	Security data	O	0
7	/STBY	(+5V pull-up)	—	5.1	47	VCC	+5V power supply	—	5.1
8	VCC	+5V power supply	—	5.1	48	E2.D2	Security data	I	0
9	AMP/RADIO. ON	AMP/Radio power control	O	5.0	49	CAPON	Tape power control	O	5.0
10	FM.ON	FM power control	O	5.1	50	CMPON	Tape power control	O	5.0
11	P.ON	System power control	O	5.1	51	M2	Tape motor control	O	5.0
12	VSS	Ground	—	0	52	SOL	Solenoid control	O	5.0
13~15	—	(Connecting to ground)	—	0	53	M1-B	Tape motor control	O	0
16	TEL.MUTE	Telephone mute	I	5.1	54	M1-A	Tape motor control	O	0
17	BAT.DET	Battery level detection	I	4.7	55	MS.OUT	Tape MS detection	O	0
18	/S.CONT	Key status signal	I	5.1	56	VSS	Ground	—	0
19	/P.SW	Power switch	I	4.6	57	MS.MODE	MS mode selection	O	0
20	/EJ	Eject switch	I	4.6	58	DOLBY	Dolby control	O	0
21	LCD.CE	LCD chip enable	O	0	59	F/R	Tape FF/REW detection	I	0
22	LCD.CLK	LCD clock	O	0	60	T.LOAD	Tape loading detection	I	0
23	LCD.D1	LCD data output	O	0	61	T.IN	Tape insert detection	I	0
24	LCD.D2	LCD data input	I	5.0	62	A/B.IN	Tape side detection.	I	0
25	ENSW-A	Panel encoder switch	I	0	63	END-B	Tape end detection	I	2.3
26	ENSW-B	Panel encoder switch	I	0	64	END-A	Tape end detection	I	2.3
27	TEL.MUTE	Telephone mute	I	0	65	T.PLAY	Tape play detection	I	0
28	RDS.CLK	RDS clock	I	2.9	66	VOL.CLK	Electronic volume clock	O	0
29	AVCC	+5V power supply	—	5.1	67	VOL.DATA	Electronic volume data	O	0
30	SEL1	(Ground pull-down)	—	0	68	SV.ST	Sub.volume strobe **(Note 2)**	O	0
31	SEL2	(+5V pull-up)	—	4.7	69	SV.CLK	Sub.volume clock **(Note 2)**	O	0
32	RDS.DATA	RDS data	I	2.9	70	SV.DATA	Sub. volume data **(Note 2)**	O	0
33	AV.CONT	AM level detection	I	1.0	71	/MUTE	Mute output	O	5.1
34	FV.CONT	FM level detection	I	0.6	72	/AF.MUTE	Mute output	O	5.1
35	MP	Multi-path detection	I	0	73	VSS	Ground	—	0
36	NOISE	Adjustment station detection	I	1.7	74~76	—	(Connecting to ground)	—	0
37	ST	FM stereo detection	I	0.3	77	—	Not used	—	0
38	AVSS	Ground	—	0	78	CD.REMO	CD remocon data	O	5.1
39	PLL.CE	PLL chip enable	O	0	79	CD.DATA	CD data	I	5.1
40	PLL.CLK	PLL clock	O	0	80	CD.CLK	CD clock	I	5.1

Note 1 :
Volume measurements are with respect to ground, with a voltmeter (Internal resistance : 10M ohms.)

Note 2 : CQ-LP2820Z only

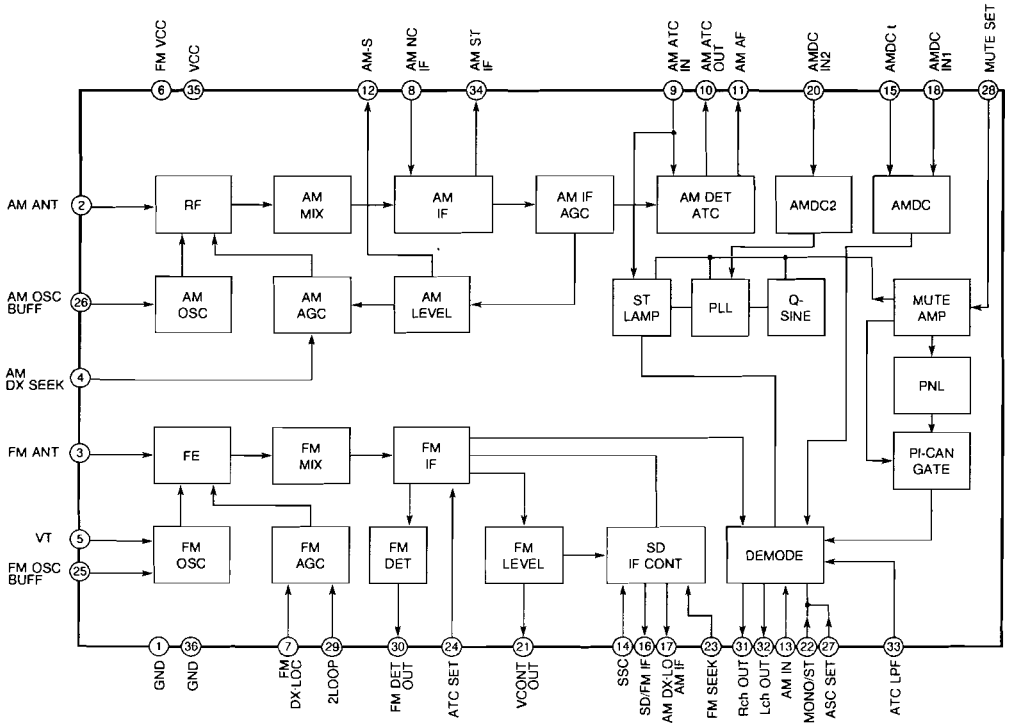
<Display Block>

■ IC751 YEAL75853

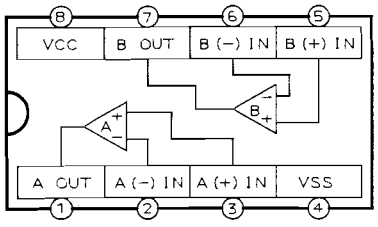
Pin No.	Port	Description	I/O	Vol.(V)	Pin No.	Port	Description	I/O	Vol.(V)
1~40	S1~40	LCD segment output	O	2.5	57	VDD1	Ground through capacitor	—	3.3
41~43	COM1~3	LCD common output	O	2.5	58	VDD2	Ground through capacitor	—	1.7
44~46	KS1~3	Key scan signal	O	0.9	59	VSS	Ground	—	0
47~49	—	Not used	—	—	60	OSC	CR oscillator	—	3.9
50~53	KS1~4	Key data input	I	0	61	DO	Key data output	O	4.4
54	KI5	Not used	—	—	62	CE	Chip enable	I	0
55	TEST	(Connecting to ground)	—	0	63	CL	LCD clock	I	0
56	VDD	+5V power supply	—	5.1	64	DI	LCD data input	I	0

PACKAGE AND IC BLOCK DIAGRAM

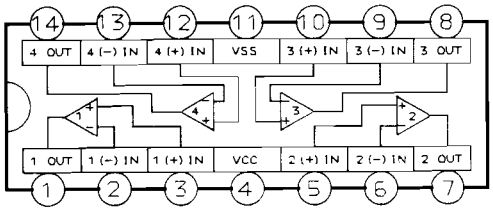
● PA101 YEP0PTA513A0



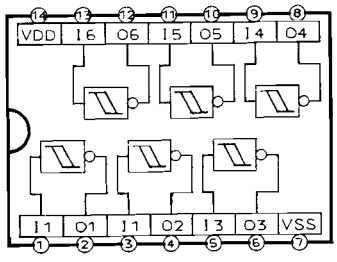
● IC131,202
● IC352<CQ-LP2820Z only>
YEAMM5218FE



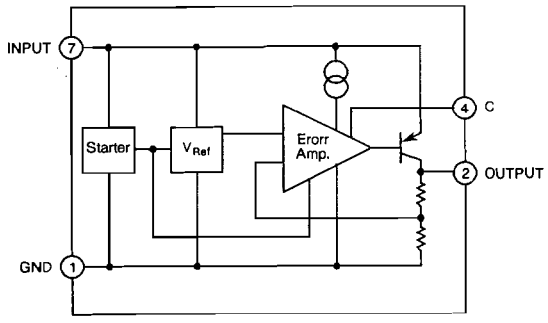
● IC101,151
● IC354,355<CQ-LP2820Z only>
YEAMPC4574T2



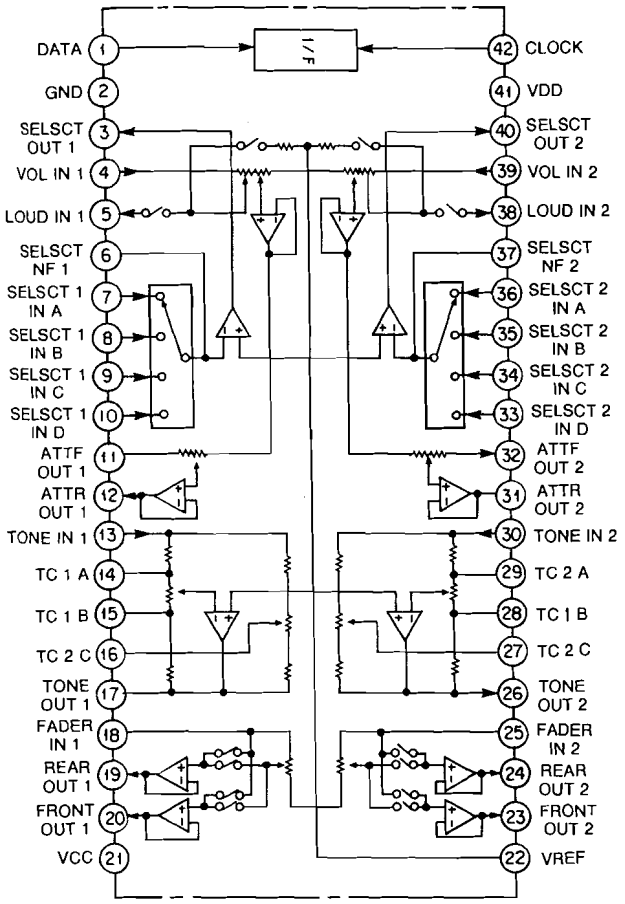
● IC604
MC14584BDR2



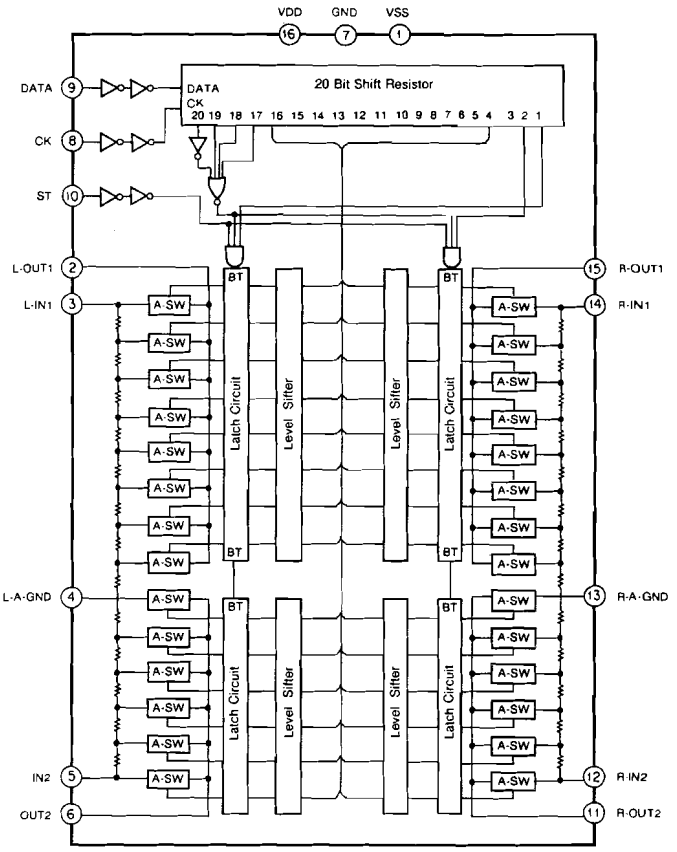
● IC606
YEAMLA5010M



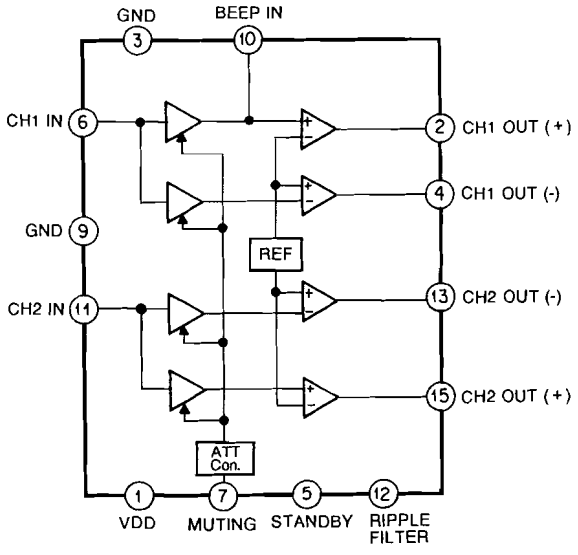
● IC301 YEAMM62419T1



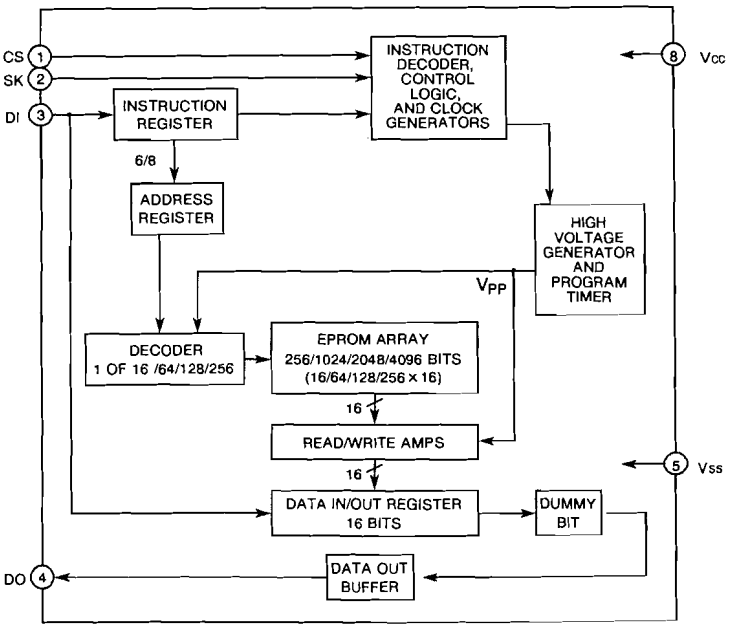
● IC353 YEAMTC9176P <CQ-LP2820Z only>



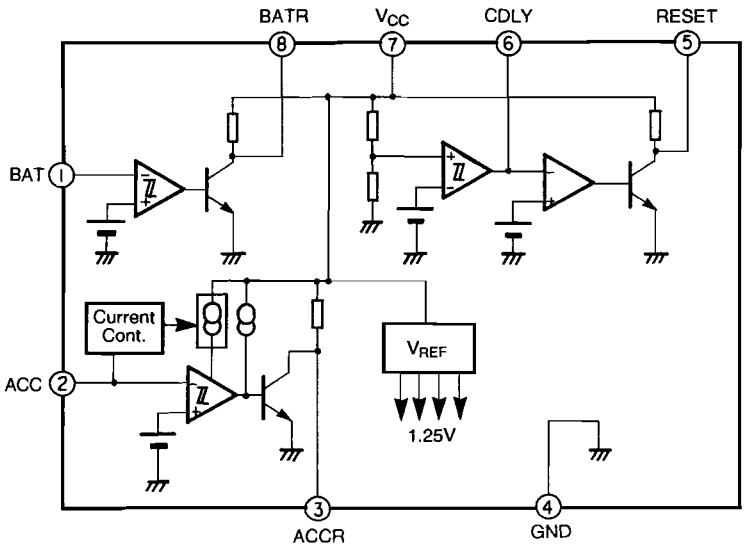
● IC281,381 <CQ-LP2821Z only> AN7190NKLC



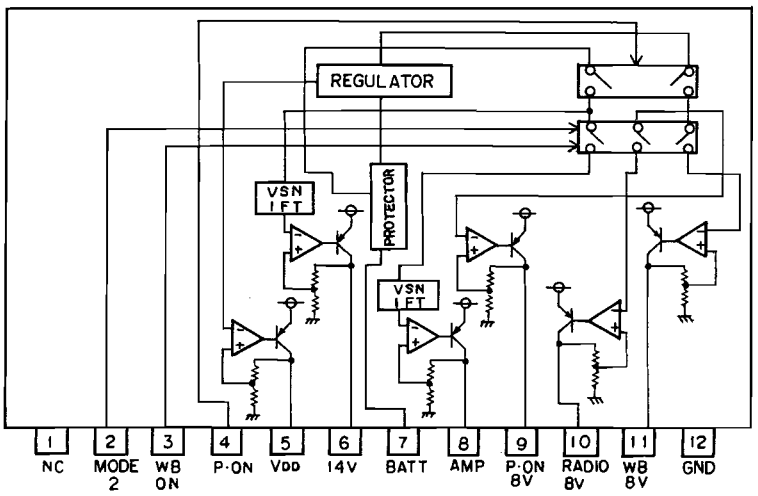
● IC602 YEAMN93C46EMX



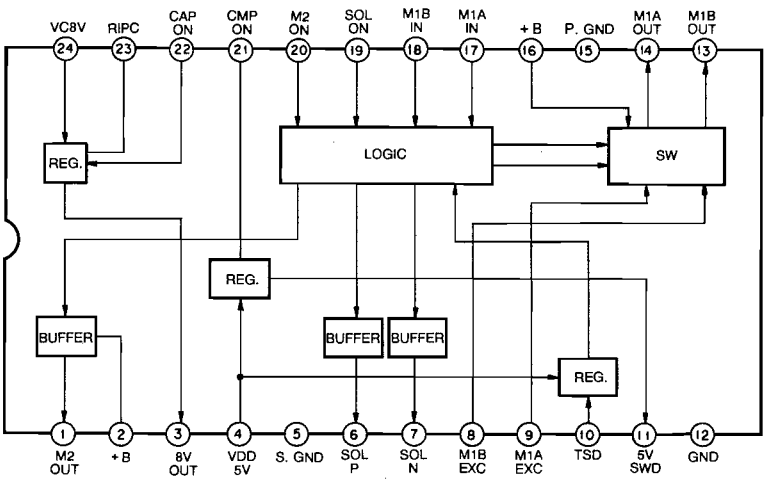
● IC603 AN8065SE1



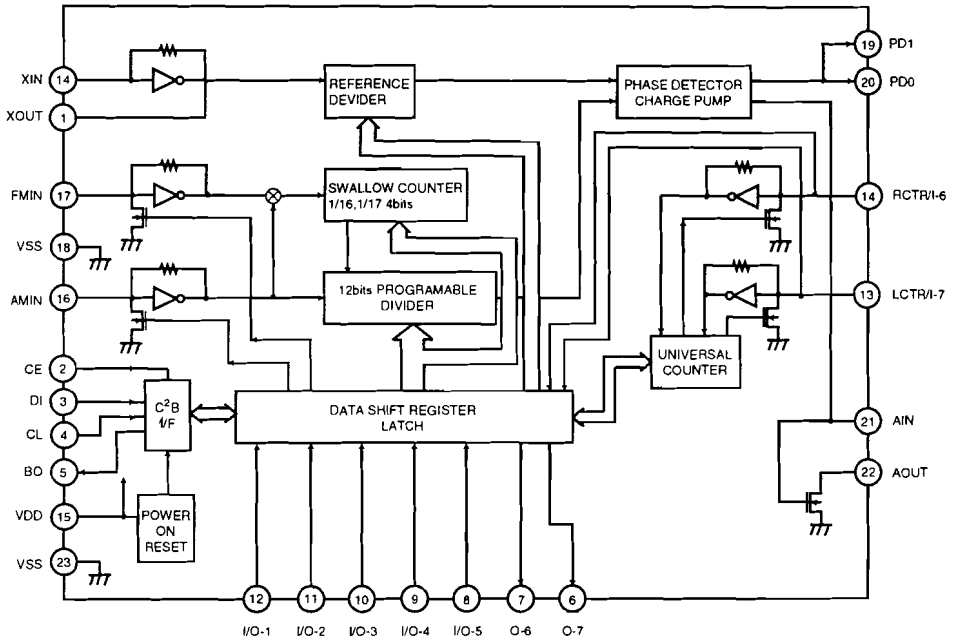
● IC605 YEAMBA4900V3



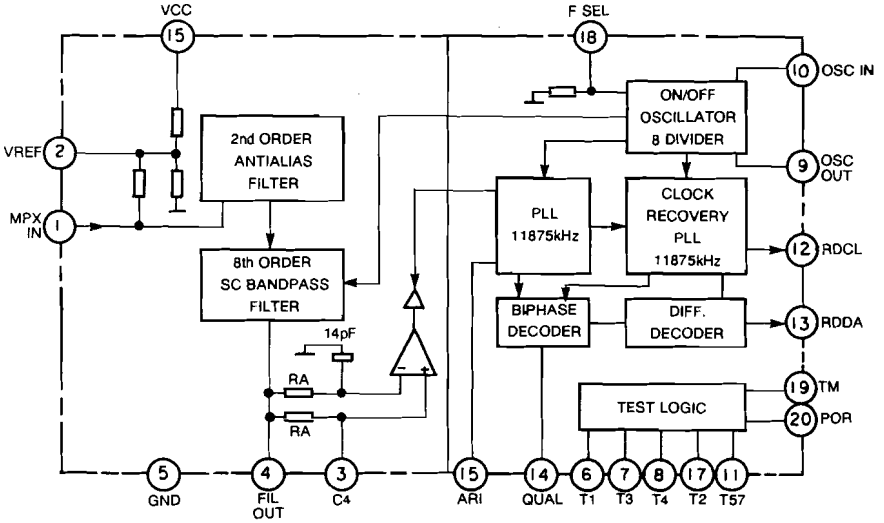
● IC608 AN6277NK



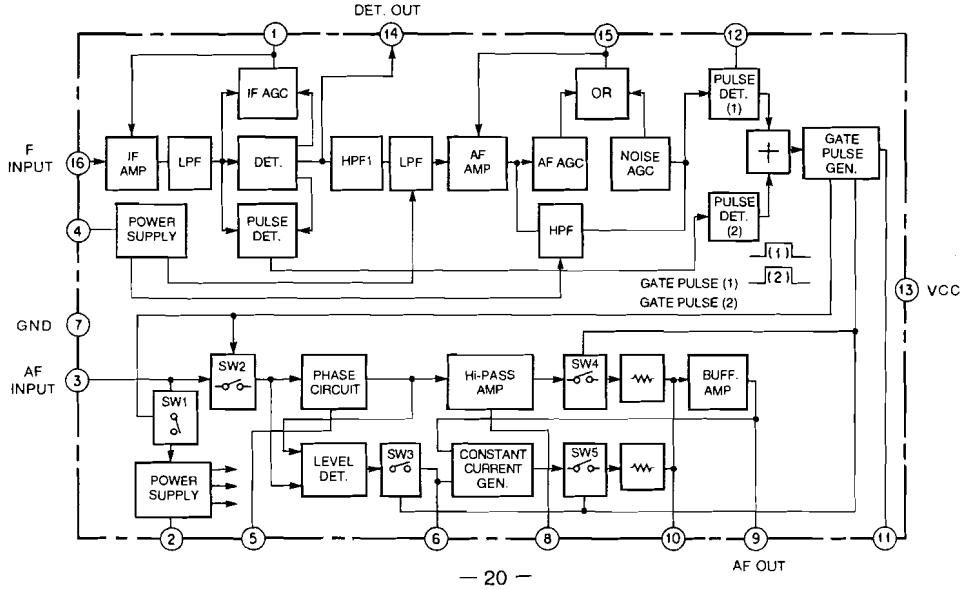
● IC701 YEAMLC72146T



● IC702 YEAMDA7330BD



● IC130 YEAMHA12181F



1 Replacement Parts List

Notes :

1. Be sure to make your orders of replacement parts according to this list.
2. Important safety notice: Components, identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Location keys in the remarks column indicates the general location of the parts shown in the exploded drawing, as in a road map.
4. The marking (RTL) indicates that Retention Time is limited for this item. After the discontinuation of assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.
5. "MCC" marks in remarks column are indicated supply parts of Matsushita Communication Industrial Corp. of America (MCC).

1.1. IC's and Transistors

[M3J408008A]

Ref. No.	Part No.	Part Name & Description	Remarks
IC101	AN6564NST1	IC	
IC130	YEAMHA12181F	IC	
IC131	AN6552S	IC	
IC151	YEAMPC4574T2	IC	
IC202	YEAMM5218AFE	IC	
IC281	AN7190NKLC	IC	LP2821Z
IC301	YEAMM62419T1	IC	
IC352	YEAMM5218AFE	IC	LP2820Z
IC353	YEAMTC9176P	IC	LP2820Z
IC354	YEAMPC4574T2	IC	LP2820Z
IC355	YEAMPC4574T2	IC	LP2820Z
IC381	AN7190NKLC	IC	LP2821Z
IC601	YEAMH3397F01	IC	
IC602	YEAM93C46EMX	IC	
IC603	AN8065SE1	IC	
IC604	MC14584BDR2	IC	MCC
IC605	YEAMBA4900V3	IC	
IC606	YEAMLA5010M	IC	
IC607	YEAMPC78L05T	IC	
IC608	AN6277NK	IC	
IC701	YEAMLC72146T	IC	
IC702	YEAMDA7330BD	IC	
IC751	YEAMLC75853	IC	
PA101	YEP0PTA513A0	Radio Tuner	
Q101	YEANC144EKT	Transistor	
Q131	YEANC144EKT	Transistor	
Q132	YEANA144EKT	Transistor	
Q133	YEANC144EKT	Transistor	
Q134	YEANC144EKT	Transistor	
Q151	YEANC1623	Transistor	
Q203	YEANC144EKT	Transistor	
Q251	YEANC3661TA	Transistor	
Q252	YEANC3661TA	Transistor	
Q303	YEANC144EKT	Transistor	
Q351	YEANC3661TA	Transistor	
Q352	YEANC3661TA	Transistor	
Q602	YEANA114EKTX	Transistor	
Q603	YEANA114EKTX	Transistor	
Q604	YEANA812T2	Transistor	
Q605	YEANC1623	Transistor	
Q606	2SD1030TX	Transistor	
Q607	YEANC1623	Transistor	
Q608	YEAN2SA1327	Transistor	
Q609	YEANBP1F3PT	Transistor	
Q610	YEANC114YKT	Transistor	
Q701	YEAN2SK536TB	Transistor	

1.2. Diodes

[M3J408008A]

Ref. No.	Part No.	Part Name & Description	Remarks
D151	MA153TX	Diode	
D152	MA153TX	Diode	
D153	MA721TX	Diode	
D201	MA721TX	Diode	LP2820Z
D601	MA165	Diode	
D602	MA151WA	Diode	
D603	MA151WKTX	Diode	LP2820Z
D603	MA151K	Diode	LP2821Z
D604	MA165	Diode	
D605	MA151WA	Diode	
D606	MA151ATX	Diode	
D607	MA151K	Diode	
D608	MA151K	Diode	
D609	MA151K	Diode	
D701	YEADRD51JS3	Diode	
D702	MA165	Diode	
D751	LNJ401NPYJA	LED	
D752	LNJ401NPYJA	LED	
D753	LNJ401NPYJA	LED	LP2820Z
D754	LNJ401NPYJA	LED	
D755	LNJ401NPYJA	LED	
D756	LNJ401NPYJA	LED	
D757	LNJ401NPYJA	LED	
D758	LNJ401NPYJA	LED	
D759	LNJ401NPYJA	LED	
D760	LNJ401NPYJA	LED	
D761	LNJ401NPYJA	LED	
D762	LNJ401NPYJA	LED	
D763	LNJ401NPYJA	LED	
D764	LNJ401NPYJA	LED	
D765	LNJ401NPYJA	LED	
D766	MA28T-ATX	Diode	
D767	MA28T-ATX	Diode	LP2821Z
D781	YEADDSA3A2B	Diode	
D782	MA4082LMTA	Diode	
D787	MA165	Diode	

1.3. Capacitors

[M3J408008A] 1/2

Ref. No.	Part No.	Part Name & Description	Remarks
C102	YECUS1H102KX	Ceramic, 0.001µF 50WV	
C103	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C104	ECEA1AKS101	Electrolytic, 100µF 10WV	
C105	YECUS1E223KX	Ceramic, 0.022µF 25WV	
C106	YECUS1H153KX	Ceramic, 0.015µF 50WV	
C107	YECUS1C154KX	Ceramic, 0.15µF 16WV	
C108	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C109	YECUS1H123KX	Ceramic, 0.012µF 50WV	
C110	YECUS1C563KX	Ceramic, 0.056µF 16WV	
C111	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C112	ECA1CM100I	Electrolytic, 10µF 16WV	
C113	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C114	YECUS1H102KX	Ceramic, 0.001µF 50WV	
C115	YECUS1H102KX	Ceramic, 0.001µF 50WV	
C117	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C118	YECUS1H101JM	Ceramic, 100PF 50WV	
C119	YECUS1E223KX	Ceramic, 0.022µF 25WV	
C120	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C121	ECA1AM221B	Electrolytic, 220µF 10WV	
C131	ECEA1EKS3R3I	Electrolytic, 3.3µF 25WV	
C132	YECUS1E333KX	Ceramic, 0.033µF 25WV	
C133	ECEA1HSN010I	Electrolytic, 1µF 50WV	

Ref. No.	Part No.	Part Name & Description	Remarks
C134	YECUS1C683KX	Ceramic, 0.068µF 16WV	
C135	YECUS1E333KX	Ceramic, 0.033µF 25WV	
C136	YECUS1E333KX	Ceramic, 0.033µF 25WV	
C137	YECUS1E333KX	Ceramic, 0.033µF 25WV	
C138	YECUS1H222KX	Ceramic, 0.0022µF 50WV	
C139	ECEA1AKS101	Electrolytic, 100µF 10WV	
C140	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C141	YECUS1C224KX	Ceramic, 0.22µF 16WV	
C142	YECUS1H102KX	Ceramic, 0.001µF 50WV	
C144	ECEA1HKS010I	Electrolytic, 1µF 50WV	
C146	ECEA1AKS101	Electrolytic, 100µF 10WV	
C152	YECUS1H122KX	Ceramic, 0.0012µF 50WV	
C153	YECUS1H152KX	Ceramic, 0.0015µF 50WV	
C154	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C155	YECUS1H151JM	Ceramic, 150PF 50WV	
C156	YECUS1H151JM	Ceramic, 150PF 50WV	
C157	YECUS1H151JM	Ceramic, 150PF 50WV	
C158	YECUS1H102KX	Ceramic, 0.001µF 50WV	
C159	YECUS1H100DM	Ceramic, 10PF 50WV	
C160	YECUS1H102KX	Ceramic, 0.001µF 50WV	
C161	YECUS1E223KX	Ceramic, 0.022µF 25WV	
C163	ECA1EM100B	Electrolytic, 10µF 25WV	
C164	YECUS1H151JM	Ceramic, 150PF 50WV	
C165	ECEA1EKS4R7I	Electrolytic, 4.7µF 25WV	
C169	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C201	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C203	YECUS1C104KX	Ceramic, 0.1µF 16WV	LP2821Z
C204	ECEA1EKS4R7I	Electrolytic, 4.7µF 25WV	
C205	ECEA1CKS100I	Electrolytic, 10µF 16WV	LP2821Z
C206	YECUS1C563KX	Ceramic, 0.056µF 16WV	
C207	YECUS1H562KX	Ceramic, 0.0056µF 50WV	
C208	YECUS1H562KX	Ceramic, 0.0056µF 50WV	
C209	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C210	YECUS1H153KX	Ceramic, 0.015µF 50WV	
C211	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C216	YECUS1H153KX	Ceramic, 0.015µF 50WV	
C219	ECEA1AKS470I	Electrolytic, 47µF 10WV	
C220	ECA1CM470I	Electrolytic, 47µF 16WV	LP2820Z
C220	ECEA1CKS100I	Electrolytic, 10µF 16WV	LP2821Z
C221	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C222	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C223	YECUS1H680JM	Ceramic, 68PF 50WV	
C251	ECEA1HKS2R2I	Electrolytic, 2.2µF 50WV	
C252	ECEA1HKS2R2I	Electrolytic, 2.2µF 50WV	
C253	ECEA1HKS2R2I	Electrolytic, 2.2µF 50WV	
C254	ECEA1HKS2R2I	Electrolytic, 2.2µF 50WV	
C255	ECEA0JKS470	Electrolytic, 47µF 6.3WV	LP2820Z
C256	ECEA0JKS470	Electrolytic, 47µF 6.3WV	LP2820Z
C258	YECUS1H101JM	Ceramic, 100PF 50WV	LP2820Z
C259	YECUS1H101JM	Ceramic, 100PF 50WV	LP2820Z
C261	ECEA1CKS100I	Electrolytic, 10µF 16WV	LP2820Z
C262	YECUS1H181JM	Ceramic, 180PF 50WV	LP2820Z
C263	YECUS1H103KX	Ceramic, 0.01µF 50WV	LP2820Z
C264	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C265	YECUS1H103KX	Ceramic, 0.01µF 50WV	LP2820Z
C281	YECUS1H471JM	Ceramic, 470PF 50WV	LP2821Z
C282	YECUV1C224KX	Ceramic, 0.22µF 16WV	LP2821Z
C283	YECUV1C224KX	Ceramic, 0.22µF 16WV	LP2821Z
C284	ECEA1CKS330	Electrolytic, 33µF 16WV	LP2821Z
C286	YECUS1H471JM	Ceramic, 470PF 50WV	LP2821Z
C287	YECUV1C224KX	Ceramic, 0.22µF 16WV	LP2821Z
C288	YECUV1C224KX	Ceramic, 0.22µF 16WV	LP2821Z
C290	ECA1CM220I	Electrolytic, 22µF 16WV	LP2820Z
C290	ECA1HM2R2I	Electrolytic, 2.2µF 50WV	LP2821Z
C291	ECA1CM220I	Electrolytic, 22µF 16WV	LP2820Z
C291	ECA1HM2R2I	Electrolytic, 2.2µF 50WV	LP2821Z
C292	ECEA1HKA2R2I	Electrolytic, 2.2µF 50WV	
C301	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C303	YECUS1C104KX	Ceramic, 0.1µF 16WV	LP2821Z
C304	ECEA1EKS4R7I	Electrolytic, 4.7µF 25WV	
C305	ECEA1CKS100I	Electrolytic, 10µF 16WV	LP2821Z
C306	YECUS1C563KX	Ceramic, 0.056µF 16WV	
C307	YECUS1H562KX	Ceramic, 0.0056µF 50WV	

Ref. No.	Part No.	Part Name & Description	Remarks
C308	YECUS1H562KX	Ceramic, 0.0056µF 50WV	
C309	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C310	YECUS1H153KX	Ceramic, 0.015µF 50WV	
C311	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C316	YECUS1H153KX	Ceramic, 0.015µF 50WV	
C321	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C322	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C323	YECUS1H680JM	Ceramic, 68PF 50WV	
C351	ECEA1HKS2R2I	Electrolytic, 2.2µF 50WV	
C352	ECEA1HKS2R2I	Electrolytic, 2.2µF 50WV	
C353	ECEA1HKS2R2I	Electrolytic, 2.2µF 50WV	
C354	ECEA1HKS2R2I	Electrolytic, 2.2µF 50WV	
C355	ECEA0JKS470	Electrolytic, 47µF 6.3WV	LP2820Z
C356	ECEA0JKS470	Electrolytic, 47µF 6.3WV	LP2820Z
C358	YECUS1H101JM	Ceramic, 100PF 50WV	LP2820Z
C359	YECUS1H101JM	Ceramic, 100PF 50WV	LP2820Z
C361	ECEA1CKS100I	Electrolytic, 10µF 16WV	LP2820Z
C362	YECUS1H181JM	Ceramic, 180PF 50WV	LP2820Z
C363	YECUS1C124KX	Ceramic, 0.12µF 16WV	LP2820Z
C364	YECUS1C224ZF	Ceramic, 0.22µF 16WV	LP2820Z
C381	YECUS1H471JM	Ceramic, 470PF 50WV	LP2821Z
C382	YECUV1C224KX	Ceramic, 0.22µF 16WV	LP2821Z
C383	YECUV1C224KX	Ceramic, 0.22µF 16WV	LP2821Z
C384	ECEA1CKS330	Electrolytic, 33µF 16WV	LP2821Z
C386	YECUS1H471JM	Ceramic, 470PF 50WV	LP2821Z
C387	YECUV1C224KX	Ceramic, 0.22µF 16WV	LP2821Z
C388	YECUV1C224KX	Ceramic, 0.22µF 16WV	LP2821Z
C390	ECA1CM220I	Electrolytic, 22µF 16WV	LP2820Z
C390	ECA1HM2R2I	Electrolytic, 2.2µF 50WV	LP2821Z
C391	ECA1CM220I	Electrolytic, 22µF 16WV	LP2820Z
C391	ECA1HM2R2I	Electrolytic, 2.2µF 50WV	LP2821Z
C392	ECEA1HKA2R2I	Electrolytic, 2.2µF 50WV	LP2820Z
C392	ECA1HM2R2I	Electrolytic, 2.2µF 50WV	LP2821Z
C393	ECA1AM471B	Electrolytic, 470µF 10WV	LP2820Z
C396	YECUS1H102KX	Ceramic, 0.001µF 50WV	LP2821Z
C601	YECUS1H270JM	Ceramic, 27PF 50WV	
C602	YECUS1H270JM	Ceramic, 27PF 50WV	
C603	YECUS1H101JM	Ceramic, 100PF 50WV	
C606	YECUS1H101JM	Ceramic, 100PF 50WV	
C607	YECUS1H101JM	Ceramic, 100PF 50WV	
C608	YECUS1H101JM	Ceramic, 100PF 50WV	
C609	YECUS1H101JM	Ceramic, 100PF 50WV	
C610	YECUS1H101JM	Ceramic, 100PF 50WV	
C611	YECUS1H101JM	Ceramic, 100PF 50WV	
C612	YECUS1H101JM	Ceramic, 100PF 50WV	
C613	YECUS1H101JM	Ceramic, 100PF 50WV	
C614	YECUS1H101JM	Ceramic, 100PF 50WV	
C615	YECUS1H101JM	Ceramic, 100PF 50WV	
C616	YECUS1H101JM	Ceramic, 100PF 50WV	
C617	YECUS1H101JM	Ceramic, 100PF 50WV	
C618	YECUS1H101JM	Ceramic, 100PF 50WV	
C619	YECUS1H101JM	Ceramic, 100PF 50WV	
C620	YECUS1H101JM	Ceramic, 100PF 50WV	
C621	YECUS1H101JM	Ceramic, 100PF 50WV	
C623	YECUS1H101JM	Ceramic, 100PF 50WV	
C624	YECUS1H101JM	Ceramic, 100PF 50WV	
C625	YECUS1H101JM	Ceramic, 100PF 50WV	
C626	YECUS1H101JM	Ceramic, 100PF 50WV	
C627	YECUS1H101JM	Ceramic, 100PF 50WV	
C628	YECUS1H101JM	Ceramic, 100PF 50WV	
C629	YECUS1H101JM	Ceramic, 100PF 50WV	
C630	YECUS1H101JM	Ceramic, 100PF 50WV	
C631	YECUS1H101JM	Ceramic, 100PF 50WV	
C632	YECUS1H101JM	Ceramic, 100PF 50WV	
C633	YECUS1H101JM	Ceramic, 100PF 50WV	
C634	YECUS1H101JM	Ceramic, 100PF 50WV	
C635	YECUS1H101JM	Ceramic, 100PF 50WV	
C636	YECUS1H101JM	Ceramic, 100PF 50WV	
C637	YECUS1H101JM	Ceramic, 100PF 50WV	
C638	YECUS1H101JM	Ceramic, 100PF 50WV	
C639	YECUS1H101JM	Ceramic, 100PF 50WV	
C640	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C641	YECUS1H103KX	Ceramic, 0.01µF 50WV	

Ref. No.	Part No.	Part Name & Description	Remarks
C642	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C643	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C644	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C645	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C646	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C647	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C648	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C649	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C650	YECUS1H101JM	Ceramic, 100PF 50WV	
C651	YECUS1H101JM	Ceramic, 100PF 50WV	
C652	YECUS1H101JM	Ceramic, 100PF 50WV	
C653	YECUS1H101JM	Ceramic, 100PF 50WV	
C654	YECUS1H101JM	Ceramic, 100PF 50WV	
C655	YECUS1H101JM	Ceramic, 100PF 50WV	
C656	YECUS1H101JM	Ceramic, 100PF 50WV	
C657	YECUS1H101JM	Ceramic, 100PF 50WV	
C658	YECUS1H101JM	Ceramic, 100PF 50WV	
C659	YECUS1H101JM	Ceramic, 100PF 50WV	
C660	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C663	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C669	YECUS1H101JM	Ceramic, 100PF 50WV	
C670	ECA0JM101B	Electrolytic, 100µF 6.3WV	
C671	ECA1CM470B	Electrolytic, 47µF 16WV	
C673	ECA1AM101B	Electrolytic, 100µF 10WV	
C674	ECEA1AKS101	Electrolytic, 100µF 10WV	
C675	ECA1AM101B	Electrolytic, 100µF 10WV	
C676	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C677	ECEA1AKS101	Electrolytic, 100µF 10WV	
C678	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C679	ECEA1AKS330I	Electrolytic, 33µF 10WV	LP2820Z
C680	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C681	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C683	ECEA1CKS470I	Electrolytic, 47µF 16WV	
C684	ECEA1CKS470I	Electrolytic, 47µF 16WV	
C685	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C686	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C689	ECEA1AKS221	Electrolytic, 220µF 10WV	
C691	ECEA1HKS010I	Electrolytic, 1µF 50WV	
C692	YECUS1H103KX	Ceramic, 0.01µF 50WV	LP2820Z
C699	ECA1CM100B	Electrolytic, 10µF 16WV	
C701	YECUS1H100DM	Ceramic, 10PF 50WV	
C702	YECUS1H100DM	Ceramic, 10PF 50WV	
C703	YECUS1H101JM	Ceramic, 100PF 50WV	
C704	YECUS1H101JM	Ceramic, 100PF 50WV	
C705	YECUS1H101JM	Ceramic, 100PF 50WV	
C706	YECUS1H101JM	Ceramic, 100PF 50WV	
C707	YECUS1H101JM	Ceramic, 100PF 50WV	
C708	ECEA0JKS470	Electrolytic, 47µF 6.3WV	
C709	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C711	YECUS1H222KX	Ceramic, 0.0022µF 50WV	
C712	YECUS1E393KX	Ceramic, 0.039µF 25WV	
C713	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C714	YECUS1H220JM	Ceramic, 22PF 50WV	
C715	YECUS1H220JM	Ceramic, 22PF 50WV	
C716	ECEA0JKS220I	Electrolytic, 22µF 6.3WV	
C717	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C718	YECUS1H121JM	Ceramic, 120PF 50WV	
C719	YECUS1H271JM	Ceramic, 270PF 50WV	

[M3J408008A] 2/2

Ref. No.	Part No.	Part Name & Description	Remarks
C720	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C721	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C732	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C734	ECEA1AKS101	Electrolytic, 100µF 10WV	
C752	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C753	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C754	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C755	YECUS1H681JM	Ceramic, 680PF 50WV	
C756	YECUS1H101JM	Ceramic, 100PF 50WV	
C757	YECUS1H101JM	Ceramic, 100PF 50WV	
C758	YECUS1H101JM	Ceramic, 100PF 50WV	
C781	ECA1CM102B	Electrolytic, 1000µF 16WV	
C782	ECA1CM102B	Electrolytic, 1000µF 16WV	
C783	ECA1CM102B	Electrolytic, 1000µF 16WV	LP2821Z
C784	ECA1CM102B	Electrolytic, 1000µF 16WV	LP2821Z
C785	ECA1HM3R3I	Electrolytic, 3.3µF 50WV	
C786	ECA1CM100I	Electrolytic, 10µF 16WV	
C787	ECEA1CKA220I	Electrolytic, 22µF 16WV	
C788	ECEA1HKA2R2I	Electrolytic, 2.2µF 50WV	
C789	ECEA1CKS100I	Electrolytic, 10µF 16WV	LP2820Z
C789	ECEA0JKA220I	Electrolytic, 22µF 6.3WV	LP2821Z
C793	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C801	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C804	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C807	YECUS1H101JM	Ceramic, 100PF 50WV	
C808	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C901	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C902	YECUS1H101JM	Ceramic, 100PF 50WV	
C903	YECUS1H101JM	Ceramic, 100PF 50WV	
C904	YECUS1H101JM	Ceramic, 100PF 50WV	
C905	YECUS1C104KX	Ceramic, 0.1µF 16WV	

1.4. Resistors

[M3J408008A] 1/2

Ref. No.	Part No.	Part Name & Description	Remarks
J101	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
J104	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
J105	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
J107	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
J114	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
J115	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
J752	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
J784	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
R101	ERJ6GEYJ392	Chip, 3.9kΩ 1/10W	
R102	ERJ6GEYJ334	Chip, 330kΩ 1/10W	
R103	ERJ6GEYJ153	Chip, 15kΩ 1/10W	
R104	ERJ6GEYJ183	Chip, 18kΩ 1/10W	
R105	ERJ6GEYJ183	Chip, 18kΩ 1/10W	
R106	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R107	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R108	ERJ6GEYJ223	Chip, 22kΩ 1/10W	
R109	ERJ6GEYJ223	Chip, 22kΩ 1/10W	
R110	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
R111	ERJ6GEYJ683	Chip, 68kΩ 1/10W	
R112	ERJ6GEYJ563	Chip, 56kΩ 1/10W	
R113	ERJ6GEYJ101	Chip, 100Ω 1/10W	
R114	ERJ6GEYJ682	Chip, 6.8kΩ 1/10W	
R115	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R116	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
R117	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
R118	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
R131	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R132	ERJ6GEYJ123	Chip, 12kΩ 1/10W	
R133	ERJ6GEYJ184	Chip, 180kΩ 1/10W	
R134	ERJ6GEYJ153	Chip, 15kΩ 1/10W	
R135	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R136	ERJ6GEYJ562	Chip, 5.6kΩ 1/10W	
R137	ERJ6GEYJ332	Chip, 3.3kΩ 1/10W	
R138	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R139	ERJ6GEYJ822	Chip, 8.2kΩ 1/10W	
R140	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R141	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R142	ERJ6GEYJ822	Chip, 8.2kΩ 1/10W	
R143	ERJ6GEYJ682	Chip, 6.8kΩ 1/10W	
R144	ERJ6GEYJ334	Chip, 330kΩ 1/10W	
R153	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	
R154	ERJ6GEYJ561	Chip, 560Ω 1/10W	
R155	ERJ6GEYJ683	Chip, 68kΩ 1/10W	
R156	ERJ6GEYJ332	Chip, 3.3kΩ 1/10W	
R157	ERJ6GEYJ183	Chip, 18kΩ 1/10W	
R158	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R159	ERJ6GEYJ393	Chip, 39kΩ 1/10W	
R160	ERJ6GEYJ103	Chip, 10kΩ 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R161	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R162	ERJ6GEYJ393	Chip, 39kΩ 1/10W	
R163	ERJ6GEYJ393	Chip, 39kΩ 1/10W	
R164	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R165	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R166	ERJ6GEYJ224	Chip, 220kΩ 1/10W	
R167	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R168	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R169	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
R170	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R172	ERJ6GEYJ223	Chip, 22kΩ 1/10W	
R173	ERJ6GEYJ153	Chip, 15kΩ 1/10W	
R201	ERJ6GEYJ123	Chip, 12kΩ 1/10W	
R202	ERJ6GEYJ123	Chip, 12kΩ 1/10W	
R203	ERJ6GEYJ272	Chip, 2.7kΩ 1/10W	
R204	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R209	ERJ6GEYJ223	Chip, 22kΩ 1/10W	
R211	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	LP2821Z
R212	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R216	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R217	ERJ6GEYJ332	Chip, 3.3kΩ 1/10W	LP2820Z
R217	ERJ6GEYJ123	Chip, 12kΩ 1/10W	LP2821Z
R218	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R225	ERJ6GEYJ822	Chip, 8.2kΩ 1/10W	
R231	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2821Z
R232	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2821Z
R233	ERJ6GEYJ823	Chip, 82kΩ 1/10W	
R234	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R251	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R252	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R253	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R254	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R255	ERJ6GEYJ822	Chip, 8.2kΩ 1/10W	LP2820Z
R256	ERJ6GEYJ822	Chip, 8.2kΩ 1/10W	LP2820Z
R257	ERJ6GEYJ471	Chip, 470Ω 1/10W	LP2820Z
R258	ERJ6GEYJ182	Chip, 1.8kΩ 1/10W	LP2820Z
R259	ERJ6GEYJ471	Chip, 470Ω 1/10W	LP2820Z
R260	ERJ6GEYJ182	Chip, 1.8kΩ 1/10W	LP2820Z
R261	ERJ6GEYJ122	Chip, 1.2kΩ 1/10W	
R262	ERJ6GEYJ122	Chip, 1.2kΩ 1/10W	
R263	ERJ6GEYJ154	Chip, 150kΩ 1/10W	LP2820Z
R267	ERJ6GEYJ103	Chip, 10kΩ 1/10W	LP2820Z
R268	ERJ6GEYJ103	Chip, 10kΩ 1/10W	LP2820Z
R269	ERJ6GEYJ103	Chip, 10kΩ 1/10W	LP2820Z
R270	ERJ6GEYJ103	Chip, 10kΩ 1/10W	LP2820Z
R271	ERJ6GEYJ100	Chip, 10Ω 1/10W	LP2820Z
R272	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	LP2820Z
R273	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	LP2820Z
R274	ERJ6GEYJ105	Chip, 1MΩ 1/10W	LP2820Z
R276	ERJ6GEYJ101	Chip, 100Ω 1/10W	
R277	ERJ6GEYJ101	Chip, 100Ω 1/10W	
R281	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	LP2821Z
R282	ERJ6GEYJ2R2	Chip, 2.2Ω 1/10W	LP2821Z
R283	ERJ6GEYJ2R2	Chip, 2.2Ω 1/10W	LP2821Z
R286	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	LP2821Z
R287	ERJ6GEYJ2R2	Chip, 2.2Ω 1/10W	LP2821Z
R288	ERJ6GEYJ2R2	Chip, 2.2Ω 1/10W	LP2821Z
R290	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2820Z
R290	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	LP2821Z
R291	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2820Z
R292	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2820Z
R294	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	LP2821Z
R297	ERJ6GEYJ183	Chip, 18kΩ 1/10W	
R301	ERJ6GEYJ123	Chip, 12kΩ 1/10W	
R302	ERJ6GEYJ123	Chip, 12kΩ 1/10W	
R303	ERJ6GEYJ272	Chip, 2.7kΩ 1/10W	
R309	ERJ6GEYJ223	Chip, 22kΩ 1/10W	
R311	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	LP2821Z
R312	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R313	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
R325	ERJ6GEYJ822	Chip, 8.2kΩ 1/10W	
R331	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2821Z
R332	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2821Z

Ref. No.	Part No.	Part Name & Description	Remarks
R351	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R352	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R353	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R354	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R355	ERJ6GEYJ822	Chip, 8.2kΩ 1/10W	LP2820Z
R356	ERJ6GEYJ822	Chip, 8.2kΩ 1/10W	LP2820Z
R357	ERJ6GEYJ471	Chip, 470Ω 1/10W	LP2820Z
R358	ERJ6GEYJ182	Chip, 1.8kΩ 1/10W	LP2820Z
R359	ERJ6GEYJ471	Chip, 470Ω 1/10W	LP2820Z
R360	ERJ6GEYJ182	Chip, 1.8kΩ 1/10W	LP2820Z
R361	ERJ6GEYJ122	Chip, 1.2kΩ 1/10W	
R362	ERJ6GEYJ122	Chip, 1.2kΩ 1/10W	
R363	ERJ6GEYJ154	Chip, 150kΩ 1/10W	LP2820Z
R364	ERJ6GEYJ753V	Chip, 75kΩ 1/10W	LP2820Z
R365	ERJ6GEYJ102	Chip, 1kΩ 1/10W	LP2820Z
R366	ERJ6GEYJ154	Chip, 150kΩ 1/10W	LP2820Z
R367	ERJ6GEYJ103	Chip, 10kΩ 1/10W	LP2820Z
R368	ERJ6GEYJ103	Chip, 10kΩ 1/10W	LP2820Z
R369	ERJ6GEYJ103	Chip, 10kΩ 1/10W	LP2820Z
R370	ERJ6GEYJ103	Chip, 10kΩ 1/10W	LP2820Z
R371	ERJ6GEYJ752	Chip, 7.5kΩ 1/10W	LP2820Z
R372	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	LP2820Z
R373	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	LP2820Z
R374	ERJ6GEYJ105	Chip, 1MΩ 1/10W	LP2820Z
R376	ERJ6GEYJ101	Chip, 100Ω 1/10W	
R377	ERJ6GEYJ101	Chip, 100Ω 1/10W	
R381	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	LP2821Z
R382	ERJ6GEYJ2R2	Chip, 2.2Ω 1/10W	LP2821Z
R383	ERJ6GEYJ2R2	Chip, 2.2Ω 1/10W	LP2821Z
R386	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	LP2821Z
R387	ERJ6GEYJ2R2	Chip, 2.2Ω 1/10W	LP2821Z
R388	ERJ6GEYJ2R2	Chip, 2.2Ω 1/10W	LP2821Z
R390	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2820Z
R390	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	LP2821Z
R391	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2820Z
R392	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2820Z
R394	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	LP2821Z
R396	ERJ6GEYJ124	Chip, 120kΩ 1/10W	LP2821Z
R397	ERJ6GEYJ183	Chip, 18kΩ 1/10W	
R601	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R602	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R603	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R604	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R605	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R606	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R607	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R608	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R609	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R610	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R611	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R612	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R613	ERJ6GEYJ104	Chip, 100kΩ 1/10W	LP2821Z
R614	ERJ6GEYJ104	Chip, 100kΩ 1/10W	LP2820Z
R615	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R617	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R618	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R619	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R620	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R621	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R622	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R623	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R624	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R625	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R626	ERJ6GEYJ563	Chip, 56kΩ 1/10W	LP2820Z
R626	ERJ6GEYJ562	Chip, 5.6kΩ 1/10W	LP2821Z
R627	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R628	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R629	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R630	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R631	ERJ6GEYJ102	Chip, 1kΩ 1/10W	LP2820Z
R632	ERJ6GEYJ102	Chip, 1kΩ 1/10W	LP2820Z
R633	ERJ6GEYJ102	Chip, 1kΩ 1/10W	LP2820Z
R634	ERJ6GEYJ274	Chip, 270kΩ 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R635	ERJ6GEYJ433	Chip, 43kΩ 1/10W	
R636	ERJ6GEYJ273	Chip, 27kΩ 1/10W	
R637	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R638	ERDS1FJ100	Carbon, 10Ω 1/2W	
R639	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
R640	ERJ6GEYJ470	Chip, 47Ω 1/10W	
R641	ERJ6GEYJ470	Chip, 47Ω 1/10W	
R642	ERJ6GEYJ470	Chip, 47Ω 1/10W	
R643	ERJ6GEYJ470	Chip, 47Ω 1/10W	
R644	ERJ6GEYJ100	Chip, 10Ω 1/10W	
R645	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R646	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R647	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R648	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R649	ERJ6GEYJ103	Chip, 10kΩ 1/10W	

[M3J408008A] 2/2

Ref. No.	Part No.	Part Name & Description	Remarks
R650	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R651	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
R654	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	LP2820Z
R654	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	LP2821Z
R655	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R656	ERJ6GEYJ332	Chip, 3.3kΩ 1/10W	
R657	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R658	ERJ6GEYJ154	Chip, 150kΩ 1/10W	
R659	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R660	ERJ6GEYJ563	Chip, 56kΩ 1/10W	
R662	ERDS2TJ471	Carbon, 470Ω 1/4W	
R663	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R664	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R665	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R666	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R667	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R668	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R669	ERDS1FJ1R5	Carbon, 1.5Ω 1/2W	
R670	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
R671	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	
R672	ERJ6GEYJ153	Chip, 15kΩ 1/10W	
R673	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R674	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R675	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R676	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R677	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R678	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
R679	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R680	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R681	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R682	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R683	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R684	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R685	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R686	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R687	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R688	ERJ6GEYJ182	Chip, 1.8kΩ 1/10W	
R690	ERJ6GEYJ100	Chip, 10Ω 1/10W	LP2820Z
R691	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R701	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	
R702	ERJ6GEYJ561	Chip, 560Ω 1/10W	
R703	ERJ6GEY0R00V	Chip, 0Ω 1/10W	
R704	ERJ6GEYJ392	Chip, 3.9kΩ 1/10W	
R705	ERJ6GEYJ100	Chip, 10Ω 1/10W	
R706	ERJ6GEYJ561	Chip, 560Ω 1/10W	
R707	ERJ6GEYJ101	Chip, 100Ω 1/10W	
R708	ERJ6GEYJ225V	Chip, 2.2MΩ 1/10W	
R709	ERDS2TJ221	Carbon, 220Ω 1/4W	
R710	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R712	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R713	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R751	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R752	ERJ6GEYJ823	Chip, 82kΩ 1/10W	
R753	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R754	ERJ6GEYJ472	Chip, 4.7kΩ 1/10W	
R756	ERJ8GEYJ821V	Chip, 820Ω 1/8W	LP2820Z
R756	ERJ8GEYJ122V	Chip, 1.2kΩ 1/8W	LP2821Z
R757	ERJ8GEYJ102V	Chip, 1kΩ 1/8W	
R758	ERJ8GEYJ102V	Chip, 1kΩ 1/8W	
R759	ERJ8GEYJ102V	Chip, 1kΩ 1/8W	
R760	ERJ8GEYJ102V	Chip, 1kΩ 1/8W	
R761	ERJ8GEYJ102V	Chip, 1kΩ 1/8W	
R762	ERJ8GEYJ152V	Chip, 1.5kΩ 1/8W	
R764	ERJ8GEYJ271V	Chip, 270Ω 1/8W	
R770	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2820Z
R771	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2820Z
R772	ERJ6GEY0R00V	Chip, 0Ω 1/10W	LP2820Z
R781	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R782	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R784	ERJ6GEYJ182	Chip, 1.8kΩ 1/10W	
R785	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R786	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	
R787	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R788	ERJ6GEYJ682	Chip, 6.8kΩ 1/10W	LP2820Z
R788	ERJ6GEYJ222	Chip, 2.2kΩ 1/10W	LP2821Z
R793	ERD25TJ332	Carbon, 3.3kΩ 1/4W	
R794	ERJ6GEYJ103	Chip, 10kΩ 1/10W	
R799	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R801	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R802	ERJ6GEYJ102	Chip, 1kΩ 1/10W	
R803	ERJ6GEYJ102	Chip, 1kΩ 1/10W	

1.5. Connectors

[M3J408008A]

Ref. No.	Part No.	Part Name & Description	Remarks
CN1	YEAES09A072B	Connector, 9P	
CN2	YEAES17A071A	Connector, 17P	
CN602	YEAETKCF12PS	Connector, 12P	
CN603	YEAETKCF10PS	Connector, 10P	
CN604	YEAE9604S09S	Connector, 9P	
CN605	YEAE9604S17S	Connector, 17P	
CN606	YEAETKCF06PS	Connector, 6P	
CN607	YEAETKCF06PS	Connector, 6P	
CN781	EMCP26259A	Power Connector, 26P	
CP602	YEAETKCF12XS	Connector, 12P	
CP603	YEAETKCF10XS	Connector, 10P	
CP606	YEAETKCF06XS	Connector, 6P	
CP607	YEAETKCF06XS	Connector, 6P	

1.6. Electric Parts

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW751	YEAS09285	Switch	
SW752	YEAS09285	Switch	
SW753	YEAS09285	Switch	LP2820Z
SW754	YEAS09285	Switch	
SW755	YEAS09285	Switch	
SW756	YEAS09285	Switch	
SW757	YEAS09285	Switch	
SW758	YEAS09285	Switch	
SW759	YEAS09285	Switch	
SW760	YEAS09285	Switch	
SW761	YEAS09285	Switch	
SW762	YEAS09285	Switch	
SW767	YEAS09285	Switch	

CRYSTALS

Ref. No.	Part No.	Part Name & Description	Remarks
XL601	YEXL49U11059	Crystal OSC	
XL701	YEXL49U07200	Crystal OSC	
XL702	YEXL49U0433T	Crystal OSC	

CERAMIC FILTER

Ref. No.	Part No.	Part Name & Description	Remarks
CS781	YECCL55S222T	Noise Filter, 2200PF 100WV	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
CS101	YEXC07T009	Coil	
L101	YELT02C1R8KT	Coil	
L601	YELT02C2R2KT	Coil	
L603	YELTB2R2RT	Coil	
L605	YELT02C2R2KT	Coil	
L608	YELT02C101KT	Coil	
L609	YELTB2R2RT	Coil	
L610	YELT02C2R2KT	Coil	
L611	YELT02C2R2KT	Coil	
L701	YELT02C330KT	Coil	
L702	YELT02C2R2KT	Coil	
L704	YELT02C101KT	Coil	
L781	YETQ026X137	Coil	LP2821Z
L784	YETQ020F070	Coil	LP2820Z

LCD

Ref. No.	Part No.	Part Name & Description	Remarks
LCD751	YEXDCM1165	LCD	

LAMPS

Ref. No.	Part No.	Part Name & Description	Remarks
PL751	YEALFAAC012	Pilot Lamp	
Z101	YEAL02007	Neon Lamp	

VARIABLE RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
VR751	EVQW4B01115B	Switch	

1.7. Mechanical Parts

MISCELLANEOUS

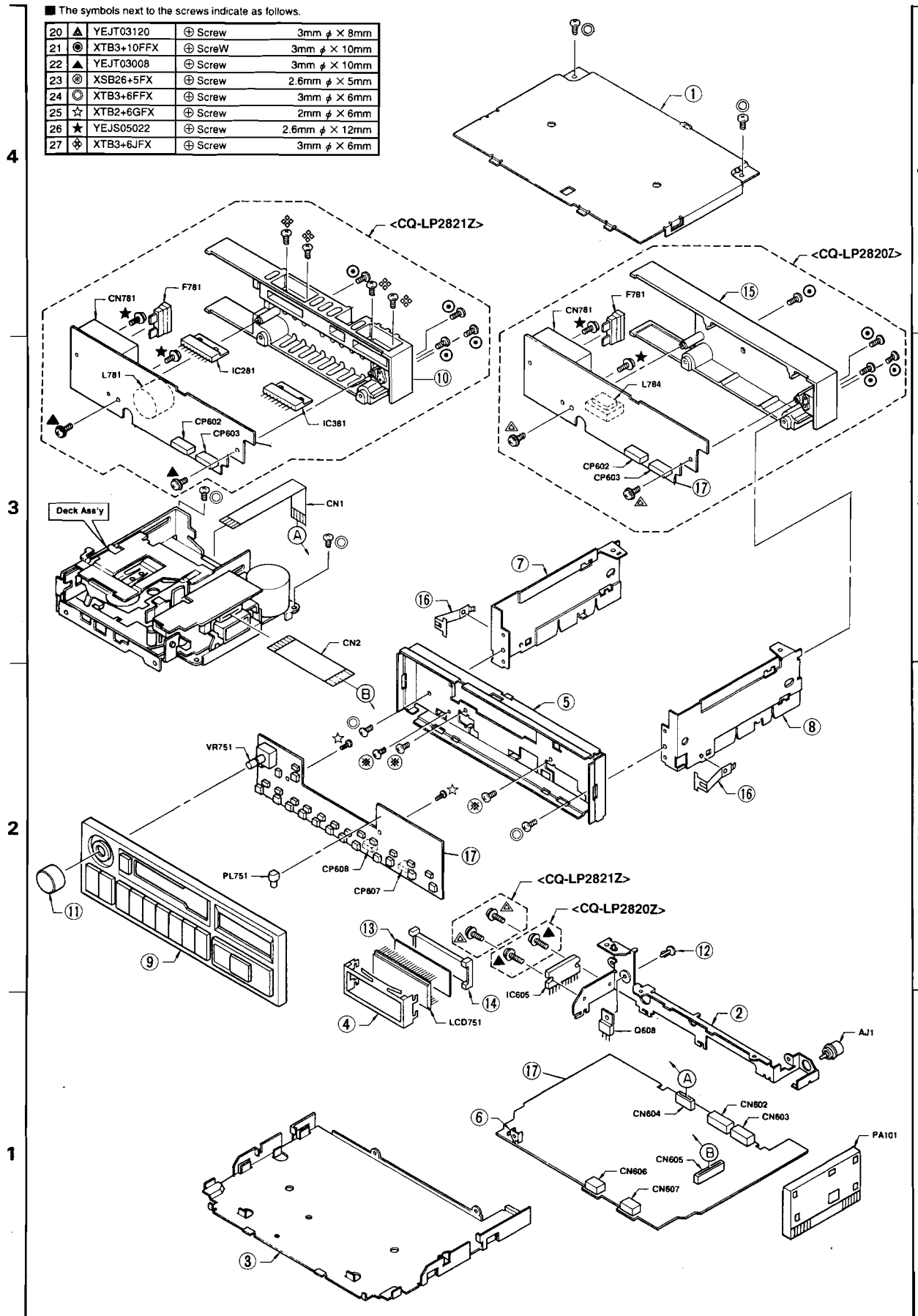
Ref. No.	Part No.	Part Name & Description	Remarks
ANT101	YEAA10051A	Antenna Receptacle	
AT1	YEAT03346A	Terminal	
F781	YEAF02003	Fuse, 3A	LP2820Z
F781	YEAF02005	Fuse, 10A	LP2821Z
1	YEFA031447	Upper Cover	(1-B)
2	YEFA08427	Rear Plate	(1-C)
3	YEFA05627	Bottom Cover	(1-C)
4	YEFA131200	Cover	(1-B)
5	YEFA07364A	Front Plate	(2-B)
6	YEFX0213797	Bracket	(1-B)
7	YEFA09510	Side Plate(L)	(3-B)
8	YEFA09511AK	Side Plate(R)	(2-C)
9	YGFC024781C	Escutcheon Ass'y	(2-C) LP2820Z
9	YGFC024782C	Escutcheon Ass'y	(2-A) LP2821Z
10	YGFF01825	Heat Sink	(3-B) LP2821Z
11	YEFE07458	Knob,VOL	(2-A)
12	YEFJ05030	Color Rivet	(2-C)
13	YEFV021440	Optical Shade	(2-B)
14	YGFX0011654A	Transparent Plate	(2-B)
15	YEFX9991512	Rear Cover	(3-C) LP2820Z
16	YEFX0052058	Spring	(2-C) (3-B)
17	YEP0PT6596X9	PCB w/Component	RTL,MCC ,LP2820 Z
17	YEP0PT6596W9	PCB w/Component	RTL,MCC ,LP2821 Z
20	YEJT03120	Tapping Screw, 3mm * 8mm	
21	XTB3+10FFX	Tapping Screw, 3mm * 10mm	
22	YEJT03008	Tapping Screw, 3mm * 10mm	
23	XSB26+5FX	Screw, 2.6mm * 5mm	
24	XTB3+6FFX	Tapping Screw, 3mm * 6mm	
25	XTB2+6GFX	Tapping Screw, 2mm * 6mm	
26	YEJS05022	Screw, 2.6mm * 12mm	
27	XTB3+6JFX	Tapping Screw, 3mm * 6mm	LP2821Z

EXPLODED VIEW (Unit)

■ Numbers in ○ are indicated REF.NO. in the REPLACEMENT PARTS LIST

■ The symbols next to the screws indicate as follows.

20	△	YEJT03120	⊕ Screw	3mm ϕ × 8mm
21	◉	XTB3+10FFX	⊕ ScreW	3mm ϕ × 10mm
22	▲	YEJT03008	⊕ Screw	3mm ϕ × 10mm
23	⊛	XSB26+5FX	⊕ Screw	2.6mm ϕ × 5mm
24	◎	XTB3+6FFX	⊕ Screw	3mm ϕ × 6mm
25	☆	XTB2+6GFX	⊕ Screw	2mm ϕ × 6mm
26	★	YEJS05022	⊕ Screw	2.6mm ϕ × 12mm
27	❖	XTB3+6JFX	⊕ Screw	3mm ϕ × 6mm



2 Tape Player Parts

2.1. IC's and transistors

PRE-AMP BLOCK [E8111]

Ref. No.	Part No.	Part Name & Description	Remarks
IC51	YEAMCXA1980Q	IC	

2.2. Diodes

PRE-AMP BLOCK [E8111]

Ref. No.	Part No.	Part Name & Description	Remarks
D1	YEADEC10DS1	Diode	

REEL BLOCK [E8081]

Ref. No.	Part No.	Part Name & Description	Remarks
D1, 2	ON2550MCQRS	Photoreflector	

2.3. Capacitors

PRE-AMP BLOCK [E8111]

Ref. No.	Part No.	Part Name & Description	Remarks
C51- 54	YECUS1H221JM	Ceramic, 220PF 50WV	
C55	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C56	ECA1ASA330I	Electrolytic, 33µF 10WV	
C57	ECA1HSAR22I	Electrolytic, 0.22µF 50WV	
C58	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C59	ECEA1AKS330I	Electrolytic, 33µF 10WV	
C60	ECEA1HKSR22I	Electrolytic, 0.22µF 50WV	
C61	ECEA1AKS330I	Electrolytic, 33µF 10WV	
C62	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C63	ECA1CSA100I	Electrolytic, 10µF 16WV	
C64	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C65	ECA1HSA010I	Electrolytic, 1µF 50WV	
C66	YECUS1H153KX	Ceramic, 0.015µF 50WV	
C67	YECUS1E333KX	Ceramic, 0.033µF 25WV	
C68	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C69, 71	YECUV2A103KX	Ceramic, 0.01µF 100WV	

2.4. Resistors

PRE-AMP BLOCK [E8111]

Ref. No.	Part No.	Part Name & Description	Remarks
R9	ERJ6GEYJ472	Chip, 4.7k Ω 1/10W	
R55	ERJ6GEYJ223	Chip, 22k Ω 1/10W	
R56	ERJ6GEYJ183	Chip, 18k Ω 1/10W	
R57	ERJ6GEYJ102	Chip, 1k Ω 1/10W	
R58	ERJ6GEYJ682	Chip, 6.8k Ω 1/10W	
R60	ERJ8GEYJ473V	Chip, 47k Ω 1/8W	
R64	ERJ6GEYJ473	Chip, 47k Ω 1/10W	
R65	ERJ6GEYJ223	Chip, 22k Ω 1/10W	
R59	ERJ6GEYJ334	Chip, 330k Ω 1/10W	

REEL BLOCK [E8081]

Ref. No.	Part No.	Part Name & Description	Remarks
R1	ERJ8GEYJ751V	Chip, 750 Ω 1/8W	
R2, 3	ERJ8GEYJ204V	Chip, 200k Ω 1/8W	
R4, 5	ERJ8GEYJ472V	Chip, 4.7k Ω 1/8W	

2.5. Connectors

PRE-AMP BLOCK [E8111]

Ref. No.	Part No.	Part Name & Description	Remarks
CN1	YEAE012385	Connector, 17P	
CN2	YEAESLW05R1	Connector, 5P	
CN3	YEAE03191	Connector, 2P	

REEL BLOCK [E8081]

Ref. No.	Part No.	Part Name & Description	Remarks
CN1	YEAE03192	Connector, 9P	

2.6. Electric Parts

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW1	YEAS09277	Switch	
SW2, 4	YEAS09263R	Switch	
SW3	YEAS23150	Switch	
SW5	YEAS23151A	Switch	

VARIABLE RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
VR51, 52	EVNDXAA00B13	Variable Resistor	

2.7. Mechanical Parts

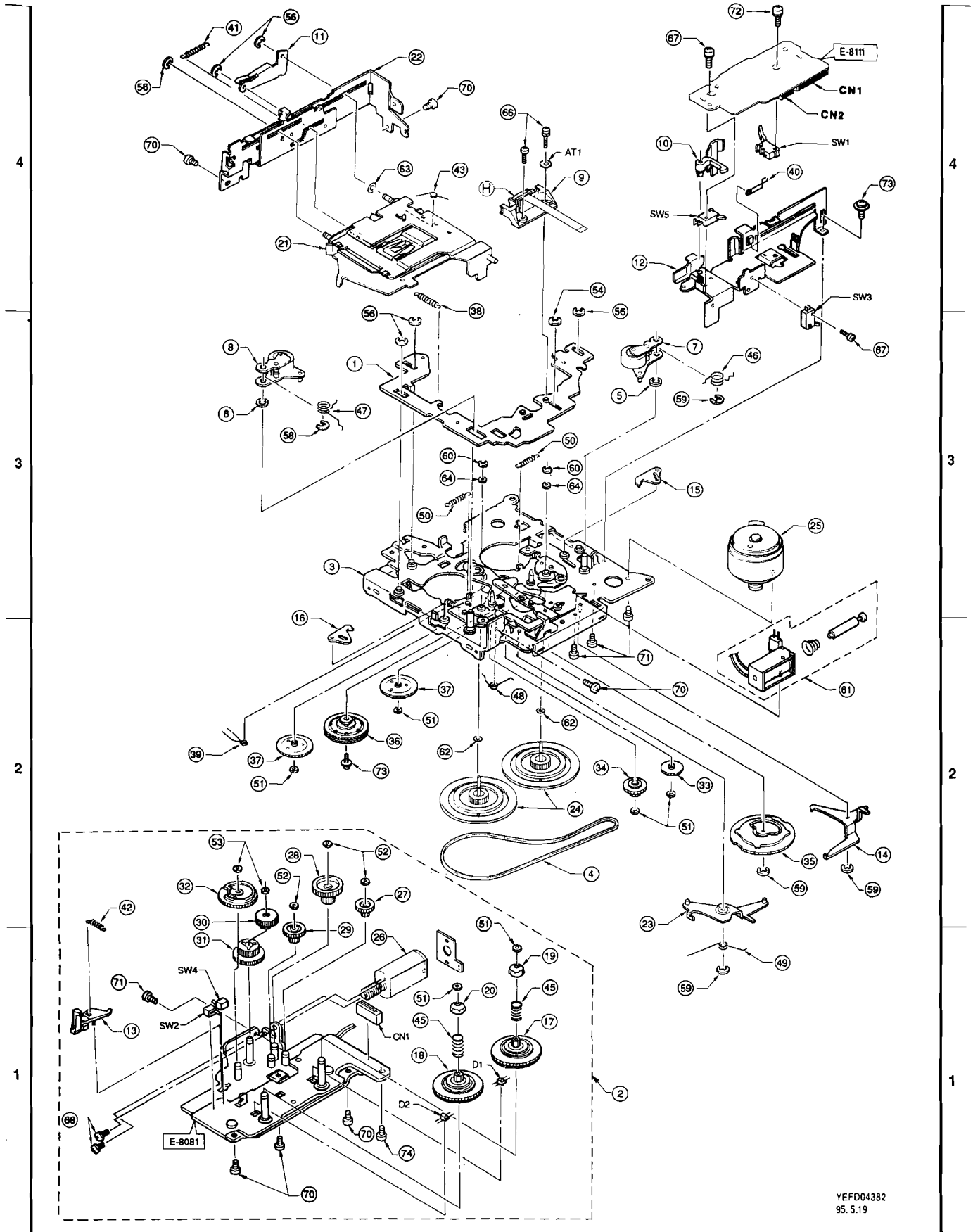
MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
1	YEFA011526A	Head Chassis Ass'y	(3-B)
2	YEP0FX2485	Sub Chassis Ass'y	(1-A) (1-B)
3	YEFA011524	Chassis Ass'y	(3-B)
4	YEFR03069B	Drive Belt	(2-B)
5	YEFW05273	Pinch Roller Arm Collar (L)	(3-C)
6	YEFW05274	Pinch Roller Arm Collar (R)	(3-A)
7	YEFX218241C	Pinch Roller (L) Ass'y	(3-C)
8	YEFX218243C	Pinch Roller (R) Ass'y	(3-A)
9	YEP9FZ2456	Head Ass'y	(4-B)
10	YEFX0461651	Starting Point Lever	(4-C)
11	YEFX0461157E	Carrige Slide Plate	(4-A)
12	YEFX239413A	Cassette Guide Plate Ass'y	(4-C)
13	YEFX0461640	EQ Lever	(1-A)
14	YEFX046989B	Solenoid Cover	(2-C)
15	YEFX046991	Gear Plate Escape Plate (L)	(3-C)
16	YEFX046992	Gear Plate Escape Plate (R)	(2-B)
17	YEFX209266	Reel Ass'y L	(1-B)
18	YEFX209267	Reel Ass'y R	(1-B)
19	YEFX234176	Cam L	(1-B)
20	YEFX234177	Cam R	(1-B)
21	YEFX0461692	Carrige Ass'y	(4-B)
22	YEFX239425	Carrige Guide Plate Ass'y	(4-A)
23	YEFX0461004D	Head Return Lever Ass'y	(2-C)
24	YEFX213206	Flywheel	(2-B)
25	YEP0FX2462	Main Motor Ass'y	(3-C)
26	YEP0FX2611S	Loading Motor Ass'y	(1-B)
27	YEFX003431B	Drive Idler Gear	(2-B)
28	YEFX003379B	Drive Gear (2)	(2-A)
29	YEFX003380	Drive Gear (3)	(2-A)
30	YEFX003718	Drive Gear (4) Upper	(2-A)
31	YEFX003719	Drive Gear (4) Bottom	(1-A)
32	YEFX003382B	Drive Gear (5)	(2-A)
33	YEFX003376	Mode Change Gear (1)	(2-C)
34	YEFX003377	Mode Change Gear (2)	(2-C)
35	YEFX003378B	Mode Change Gear (3)	(2-C)
36	YEFX003389A	FR Gear Ass'y	(2-B)
37	YEFX003375A	Play Idler Gear	(2-A) (2-B)
38	YEFX0051248A	Spring, Head Chassis	(3-B)
39	YEFX0052007	Spring, FR Gear Plate	(2-A)
40	YEFX0051977	Spring	(4-C)
41	YEFX0051254E	Spring, Lock Plate	(4-A)
42	YEFX0051255A	Spring, EQ Lever	(2-A)
43	YEFX0051261B	Spring, Lock Plate	(4-B)
45	YEFX0051269	Spring, Back-tension	(1-B)
46	YEFX0051256A	Spring, Pinch Roller Pressure(L)	(3-C)
47	YEFX0051257A	Spring, Pinch Roller Pressure(R)	(3-A)
48	YEFX0051259A	Spring, Trigger	(2-B)

Ref. No.	Part No.	Part Name & Description	Remarks
49	YEFX0051258	Spring, Head	(1-C)
50	YEFX0051249B	Spring,Idler Plate	(3-B)
51	YEFX014040	Snap Ring, 2mm	
52	YEFX014041	Snap Ring, 2.5mm	(2-A) (2-B)
53	YEFX014047	Snap Ring, 3mm	(2-A)
54	XUC15V	Retaining Ring, 1.5mm	(3-B)
56	XUC2V	Retaining Ring, 2mm	
58	XUC3V	Retaining Ring, 3mm	(3-A)
59	YEJE01004	Retaining Ring, 2mm	
60	YEJE01036	Retaining Ring, 1.6mm	(3-B)
61	YEAX01111	Solenoid Plunger	(2-C)
62	YEJW04036	Lumilar Washer, 2.1mm	(2-B)
63	YEJW05094	Lumilar Washer, 2.6mm	(4-B)
64	YEJW04123	Lumilar Washer, 2.1mm	(3-B)
66	YEJT03064	Tapping Screw, 2mm×5mm	(4-B)
67	YEJS02018FZ	Screw, 1.6mm×7mm	(3-C) (4-C)
68	YEJS06170	Screw, 2mm×2.5mm	(1-A)
70	XSB26+3FX	Screw, 2.6mm×3mm	
71	YEJS06097A	Screw, 2mm×2.5mm	
72	XYN2+C8FX	Screw, 2mm×8mm	(4-C)
73	YEJS05021	Screw, 2mm×3mm	(2-B) (4-C)
74	XYN2+C4FX	Screw, 2mm×4mm	(1-B)
75	YEAT05019	Terminal	
76	YEP0PT8111A0	PCB w/Component	(4-C) RTL

EXPLODED VIEW (Tape Deck)

■ Numbers in ◯ are indicated REF.No. in the REPLACEMENT PARTS LIST



M3J408008Ab

AF AMP
IC352
YEAMM5218AFE

SHIFT REG.
IC353
YEAMTC9176P

FILTER
IC354, 355
YEAMPC4574T1

AMP
IC202
YEAMM5218AFE

D781 YEADDSA3A2B
D782 MA4082MTA
D787 MA165TA

POWER CONT.
IC605 YEAMBA4900V3

MUTE
Q602 YEANA114EKTX
Q603 YEANA114EKTX
Q604 YEANA812T1
Q605 YEANC1623T1
Q606 2SD1030TX

D601
MA165TA
D602
MA151WATX
D603
MA151WKTX
D604
MA165TA
D606
MA151ATX
D607~609
MA151KTX

TAPE CONT.
IC608 AN6277NK

SWITCH
Q203, 303
YEANC144EKTX
D605
MA151WATX

EEPROM
IC602 YEAM93C46EMX

ACC/BATT DET./RESET
IC603 AM8065E1

BUFFER
IC604 YEAMMC14584B

POWER SW
Q607 YEANC1623T1
Q608 YEAN2SA1327
Q609 YEANBP1F3PT
Q610 YEANC114YKTX

To Tape Deck P.C.B.
E-8081 CN1

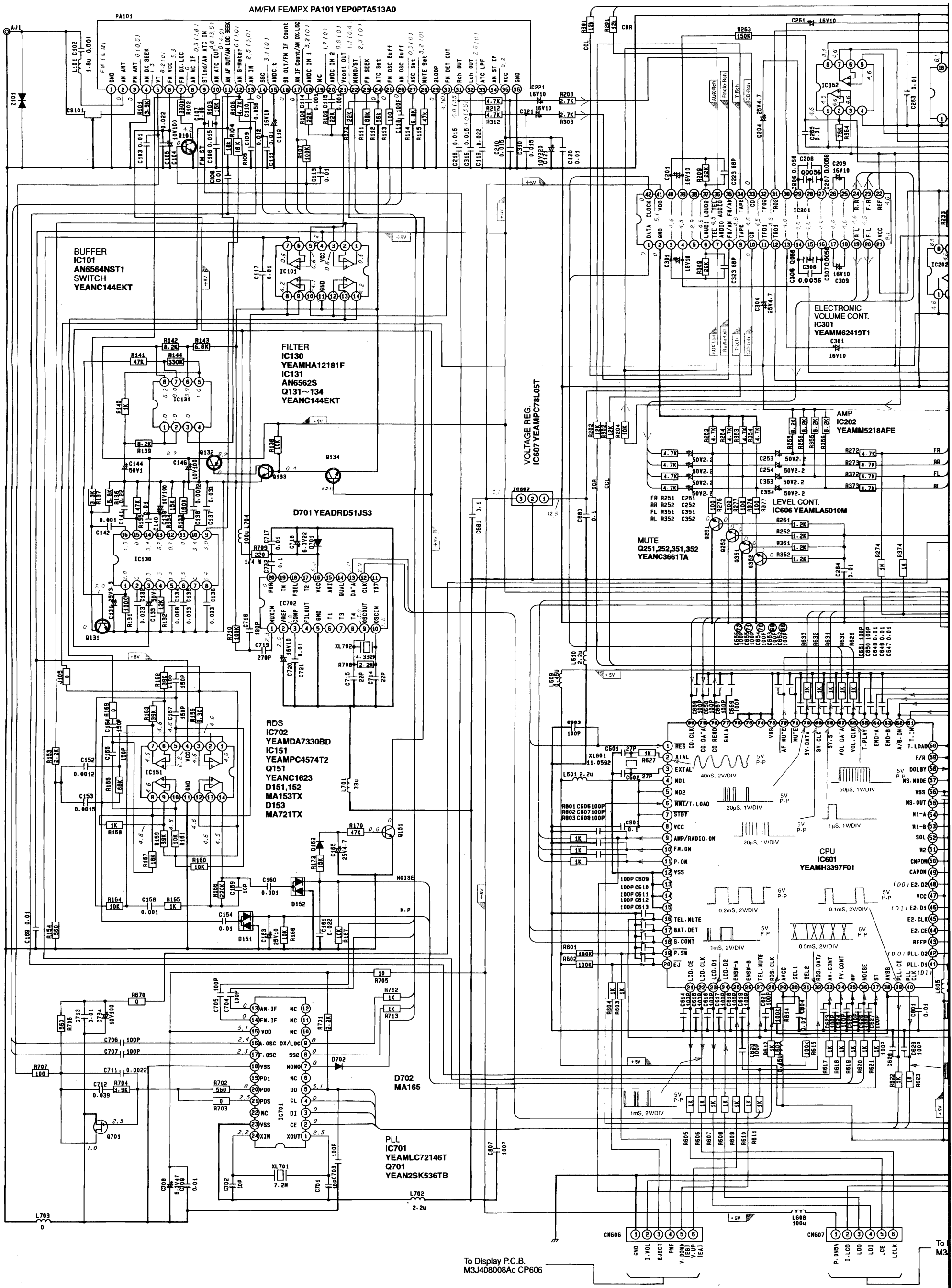
To Tape Deck P.C.B.
E-8111
CN1

To Display P.C.B.
M3J408008Ac CP607

<IC601>

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
4.6	2.2	1.8	5.1	5.1	0	5.1	5.1	5.0	5.1	5.1	0	0	0	0	5.1	4.7	5.1	4.6	4.6	0	0	0	5.0	0	0	0	2.9	5.1	0	4.7	2.9	1.0	0.6	0	1.7	0.3	0	0	0
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
0	5.0	0	0	0	0	5.1	0	5.0	5.0	5.0	5.0	0	0	0	0	0	0	0	0	0	4.8	2.3	2.3	0	0	0	0	0	0	5.1	5.1	0	0	0	0	0	5.1	5.1	5.1

SCHEMATIC DIAGRAM (Main, AMP Block) MODEL CQ-LP2820Z



M3J408008Ab

POWER AMP
IC281,381 AN7190NKLC

AF AMP
IC202
YEAMM5218AFE

POWER CONT.
IC605 YEAMBA4900V3

MUTE
Q602 YEANA114EKTX
Q603 YEANA114EKTX
Q604 YEANA812T1
Q605 YEANC1623T1
Q606 2SD1030TX

D601
MA165TA
D602
MA151WATX
D603
MA151WKTX
D604
MA165TA
D606
MA151ATX

D781 YEADDSA3A2B
D782 MA4082MTA
D787 MA165TA

D607~ 609 MA151KTX

TAPE CONT.
IC608 AN6277NK

SWITCH
Q203, 303
YEANC144EKTX
D605
MA151WATX

EEPROM
IC602 YEAM93C46EMX

ACC/BATT DET./RESET
IC603 AM8065E1

BUFFER
IC604 YEAMMC14584B

POWER SW
Q607 YEANC1623T1
Q608 YEAN2SA1327
Q609 YEANBP1F3PT
Q610 YEANC114YKTX

To Tape Deck P.C.B.
E-8081 CN1

To Tape Deck P.C.B.
E-8111
CN1

To Display P.C.B.
M3J408008Ac CP607

CPU
IC601
MH3397F01

<IC601>

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
4.6	2.2	1.8	5.1	5.1	0	5.1	5.1	5.0	5.1	5.1	0	0	0	0	5.1	4.7	5.1	4.6	4.6	0	0	0	5.0	0	0	0	2.9	5.1	0	4.7	2.9	1.0	0.6	0	1.7	0.3	0	0	0
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
0	5.0	0	0	0	0	5.1	0	5.0	5.0	5.0	5.0	0	0	0	0	0	0	0	0	0	4.8	2.3	2.3	0	0	0	0	0	0	5.1	5.1	0	0	0	0	0	5.1	5.1	5.1

SCHEMATIC DIAGRAM (Main, AMP Block) MODEL CQ-LP2821Z